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National Air Toxics Information Clearinghouse Bibliography of Selected Reports and Federal Register Notices Related to Air Toxics Volume 1. Citations

Radian Corp., Research Triangle Park, NC

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Environmental Protection Agency
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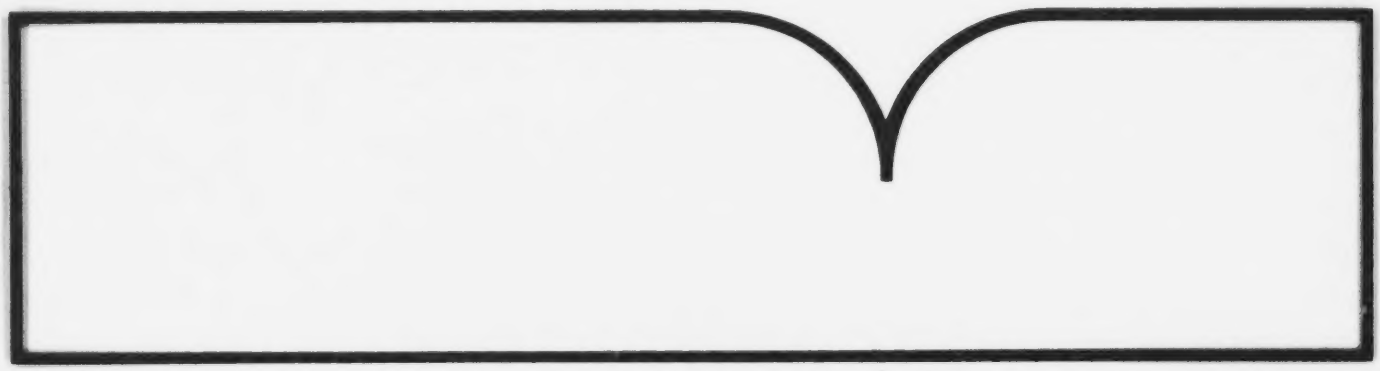
Jul 87



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NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE

EPA Office of Air Quality Planning and Standards
Research Triangle Park, North Carolina 27711

STAPPA / ALAPCO State and Territorial Air Pollution Program Administrators
Association of Local Air Pollution Control Officials

Bibliography of Selected Reports and Federal Register Notices Related to Air Toxics

Volume 1: Citations

July 1987

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NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE: BIBLIOGRAPHY OF SELECTED REPORTS AND FEDERAL REGISTER NOTICES RELATED TO AIR TOXICS VOLUME 1: CITATIONS

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This report provides State and local agencies and other Clearinghouse users with citations to reports and Federal Register notices useful in developing and operating air toxics control programs. The reports selected for this bibliography were published by the following agencies, EPA, NAS, NCI, NIEHS, NTP, NIOSH, and WHO. Reports published by various State and local agencies are also included. This report is published in two volumes. Volume 1, Part 1 includes introductory material describing the scope and organization and contains information necessary for the proper use of the document. Volume 1, Part 2 contains the report and Federal Register notice entries with bibliographic information and, in most cases, an abstract. Volume 2 consists of an index to the reports by document type; pollutant by class, name, or Chemical Abstracts Service (CAS) number; source category by Standard Industrial Classification (SIC) code; and sponsoring agency.

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Toxic Air Pollutants
State and local programs
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Risk Assessments
Health Effects

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PREFACE

In response to State and local agency requests for air toxics information and to support these agencies in their air pollution control efforts, EPA has designed and is implementing an information dissemination center, known as the National Air Toxics Information Clearinghouse. The design and implementation of the Clearinghouse has been conducted in close coordination with the State and Territorial Air Pollution Program Administrators (STAPPA) and the Association of Local Air Pollution Control Officials (ALAPCO).

The purpose of this bibliography is to provide State and local agencies with citations to reports and Federal Register notices useful to them in developing and operating air toxics control programs. The reports selected for this bibliography were published by the following agencies: U. S. Environmental Protection Agency, National Academy of Sciences, National Cancer Institute, National Institute of Environmental Health Sciences, National Toxicology Program, National Institute for Occupational Safety and Health, and World Health Organization. Relevant reports published by various State and local agencies are also included in this edition. This edition of the bibliography updates, expands, and supersedes three bibliographies previously published by the National Air Toxics Information Clearinghouse: Bibliography of Selected EPA Reports and Federal Register Notices (January 1985), Selected Bibliography of Health Effects/Risk Assessment Information (July 1984), and Bibliography of Selected Reports an Federal Register Notices Related to Air Toxics (July 1986). The citations selected for this bibliography were compiled through March 1987.

The Clearinghouse plans to continue to update this bibliography on a regular basis. Other publications of the Clearinghouse include:

- National Air Toxics Information Clearinghouse: Rationale for Air Toxics Control in Seven State and Local Agencies, EPA-450/5-86-005, PB86-181179/AS, August 1985;

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- National Air Toxics Information Clearinghouse: NATICH Data Base Report on State and Local Agency Air Toxics Activities, EPA-450/5-86-006, September 1985;
- National Air Toxics Information Clearinghouse: NATICH Data Base Users Guide for Data Viewing, EPA-450/5-85-008, PB86-123601/AS, September 1985;
- National Air Toxics Information Clearinghouse Report on State and Local Air Toxics Activities, Two Volumes, EPA-450/5-86-011, A, B, PB87-125779/AS, July 1986;
- National Air Toxics Information Clearinghouse: How The Clearinghouse Can Help to Answer Your Air Toxics Questions, EPA-450/5-86-009, July 1986;
- National Air Toxics Information Clearinghouse: Methods for Pollutant Selection and Prioritization, EPA-450/5-86-010, PB87-124079/AS, July 1986;
- National Air Toxics Information Clearinghouse: NATICH Database Users Guide for Data Entry and Editing, EPA-450/5-87-002, PB87-175576/AS, February 1987;
- National Air Toxics Information Clearinghouse: Qualitative and Quantitative Cancer Risk Assessment, EPA-450/5-87-003, June 1987;
- National Air Toxics Information Clearinghouse: Ongoing Research and Regulatory Development Projects, EPA-450/5-87-004, June 1987; and
- National Air Toxics Information Clearinghouse Newsletter, A Periodical, 16 issues to date, December 1983 - June 1987.

ABSTRACT

The National Air Toxics Information Clearinghouse has been established by the EPA Office of Air Quality Planning and Standards for the purpose of facilitating information transfer among Federal, State, and local air quality management agencies. This document has been published as part of that effort. The purpose is to provide State and local agencies and other Clearinghouse users with citations to reports and Federal Register notices useful in developing and operating air toxics control programs. The reports selected for this bibliography were published by the following agencies: U. S. Environmental Protection Agency, National Academy of Sciences, National Cancer Institute, National Institute of Environmental Health Sciences, National Toxicology Program, National Institute for Occupational Safety and Health, and World Health Organization. Reports published by various State and local agencies are also included.

This document is published in two volumes. Volume 1, Part 1 includes introductory material describing the scope and organization and contains information necessary for the proper use of the document. Volume 1, Part 2 contains the report and Federal Register notice entries with bibliographic information and, in most cases, an abstract. Volume 2 consists of an index to the reports by document type; pollutant by class, name, or Chemical Abstracts Service (CAS) number; source category by Standard Industrial Classification (SIC) code; and sponsoring agency.

This document was submitted in partial fulfillment of EPA Contract No. 68-02-4330, Work Assignment No. 23, by Radian Corporation under the sponsorship of the U. S. Environmental Protection Agency. This edition of the bibliography updates, expands, and supersedes three bibliographies previously published by the National Air Toxics Information Clearinghouse: Bibliography of Selected EPA Reports and Federal Register Notices (January 1985), Selected Bibliography of Health Effect/Risk Assessment Information (July 1984), and Bibliography of Selected Reports and Federal Register Notices Related to Air Toxics (July 1986). Compilation of citations for this edition was completed in March 1987.

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1.0 INTRODUCTION

This bibliography has been developed by the National Air Toxics Information Clearinghouse staff and the Pollutant Assessment Branch of the EPA Office of Air Quality Planning and Standards (OAQPS). Over 1350 bibliographic citations to reports and Federal Register notices related to toxic air pollutants are included. To facilitate the use of this bibliography, citations are indexed by document type, pollutant name or class and Chemical Abstract Service (CAS) number, source category and Standard Industrial Classification (SIC) code, and sponsoring agency.

Like other Clearinghouse publications, the bibliography is designed to help Clearinghouse users identify sources of information for specific air toxics questions or problems. This edition of the bibliography announces about 400 new reports and Federal Register notices. In future updates, new reports and notices will be added.

The information contained in this bibliography is also available through the National Air Toxics Information Clearinghouse on-line data base. For more information about accessing the data base, contact Nancy Riley, EPA Pollutant Assessment Branch, at (919) 541-5353, (FTS) 629-5353.

1.1 DOCUMENT SCOPE

This bibliography contains a selected list of reports and Federal Register notices which have been identified as being useful to State and local agencies developing and operating air toxics control programs. The reports were published by the following agencies: U. S. Environmental Protection Agency (EPA), National Academy of Sciences (NAS), National Cancer Institute (NCI), National Institute of Environmental Health Sciences, National Toxicology Program (NTP), National Institute for Occupational Safety and Health (NIOSH), and World Health Organization (WHO). Reports published by State and local agencies are also included.

The EPA citations include documents on the following topics:

- Ambient monitoring
- Chemical Hazard Information Profile
- Control technology
- Dispersion modeling
- Emergency response
- Emission factors
- Epidemiological study
- Exposure assessment
- Federal Register notices
- Health assessments
- Indoor air
- Emissions from mobile sources
- National emission standards for hazardous air pollutants
- New source performance standards
- Risk assessment
- Regulatory development guidance
- Source sampling
- Toxicity testing

Citations were selected within each document type according to their relevance to air toxics work. The background information documents for new source performance standards were included in this bibliography because, while their focus is on control of criteria pollutants, they also contain valuable information on the sources and control of noncriteria, potentially toxic air pollutants. Three subject areas are new to this edition of the bibliography: indoor air, dispersion modeling, and emissions from mobile sources.

The Federal Register notices include the Agency's announcements regarding Sections 111 and 112 of the Clean Air Act dealing with the new source performance standards and the national emission standards for hazardous air pollutants programs, respectively. The notices also include proposed guidelines concerning health, exposure, and risk assessments issued by the Office of Health and Environmental Assessment.

Citations for each of these document types were compiled by contacting the EPA office currently conducting that particular type of work and by supplementing those contributions by searching published lists of EPA reports, such as the EPA Publication Bibliography and the ORD Publications Announcement. The following EPA offices were among those contacted:

- Office of Air Quality Planning and Standards;
- Office of Toxic Substances;
- Office of Mobile Sources;
- Office of Policy, Planning and Evaluation;
- Office of Policy Analysis;
- Office of Research and Development;
- Office of Health and Environmental Assessment;
- Environmental Criteria Assessment Office;
- Air and Energy Engineering Research Laboratory;
- Health Effects Research Laboratory;
- Atmospheric Sciences Research Laboratory; and
- Environmental Monitoring Systems Laboratory.

Abstracts for the EPA reports were obtained from the EPA Publications Bibliography, the National Technical Information Service (NTIS) data base, or the technical data sheet included in the report. Abstracts for the Federal Register notices were prepared from the Summary and Supplementary Information sections of each notice.

Citations to reports from the six other national sponsoring agencies (NAS, NCI, NIEHS, NTP, NIOSH, and WHO) included in this bibliography focus on health, risk, and exposure assessments. Most documents discuss one or more potentially toxic chemicals, and a few emphasize exposure to toxic substances in a particular industry. While ambient air exposure was the primary area of interest, reports on occupational exposure and exposure via drinking water were also included.

The research of the National Institute of Environmental Health Sciences (NIEHS) is included in a single citation by reference to the National Institute of Environmental Health Sciences Bibliography 1966-1985. The

NIEHS does not typically publish individual monographs or reports; rather research results are generally published in technical journal articles, conference papers, and books. These types of publications were outside the scope of the bibliography.

Citations to reports from each of the five agencies on the topics of health effects and risk and exposure assessments were compiled from agency catalogs, from the National Technical Information Service data base, and from printouts generated from in-house agency data bases. Abstracts were obtained from each of these sources when available.

In addition to reports by EPA and the six other national agencies, this bibliography includes citations to relevant reports published by State and local agencies. These reports are available for distribution to other Clearinghouse users. State and local agencies have submitted citations and abstracts addressing the following topic areas:

- Ambient monitoring
- Case studies
- Control technology
- Exposure assessment
- Emergency response
- Emission factors
- Epidemiology studies
- Health assessment
- Indoor air
- Other (not classified)
- Control program support
- Risk assessment
- Rules and regulations
- Source assessment
- Source sampling
- Toxicity testing

1.2 ORGANIZATION OF DOCUMENT

This document has been published in two volumes. Volume 1 consists of the introductory material discussing scope and organization. It also contains explanatory information necessary for the proper use of the bibliography, such as keys to agency and office abbreviations and two sample bibliographic entries, as well as ordering information for reports by EPA and the other national agencies. Part 2 of Volume 1 contains the report and Federal Register notice entries with bibliographic information and, in most cases, an abstract. The report entries are arranged by document order

number. Figure 1 explains each line of two sample entries. Each entry has been assigned certain key words or descriptors pertaining to document type, pollutant, source, and sponsoring agency. These descriptors are used to generate the index and to give users several ways to access reports of interest.

Volume 2 consists of an index that will enable users to identify reports of interest. Index categories include document type, pollutant class or name and Chemical Abstracts Service (CAS) number, source category and Standard Industrial Classification (SIC) code, and sponsoring agency. Groups of chemicals or pollutants such as "organic compounds" that could not be identified more precisely by individual chemical names were assigned unique Clearinghouse identifiers in the place of CAS numbers. A list of these identifiers is found in Table 1. A key to the national sponsoring agency abbreviations appears in Table 2. Table 3 lists the document types and their abbreviations. A table of contents to the index is found at the beginning of Volume 2. This table of contents consists of an alphabetic and numeric list of all descriptors, along with their corresponding page numbers in the index. These descriptors, or index terms, represent subject headings which describe the content of a document.

This bibliography is updated annually by the National Air Toxics Information Clearinghouse. Due to its large size, next year the Clearinghouse will publish abstracts only for the newly identified reports and Federal Register notices, but will publish an index to all citations. Thus, users should save Volume 1 of this report for use after July 1988. All citations will continue to be accessible through the NATICH on-line data base.

FIGURE 1. SAMPLE ENTRIES

Report entries are arranged alphanumerically by document order number. A sample entry follows:

PB85-183085/REB	Document Order Number
Exposure Assessment for Asbestos-Contaminated Vermiculite	Report Title
EPA, Washington, D.C., OTS	Sponsoring Agency
Versar, Inc.	Corporate Author
G. H. Dixon, et al.	Personal Authors
Feb 85, 110 p, EPA-560/5-85-013, A06/MF A02	Date, Pages, Report Number, Price or Price Code
GPO No. 000-000-00000-0, $25.00	Additional Order Number, Price
Abstract: This document is an exposure assessment for asbestos-contaminated vermiculite. Such exposure is found to occur via inhalation . . .	Abstract
EA Exposure Assessment EPA U. S. Environmental Protection Agency 1332-21-4 Asbestos	Descriptors

A sample Federal Register notice entry follows:

51 FR 6382 02-21-86	FR Citation (Volume, Beginning Page, Date)
National Emission Standards for Hazardous Air Pollutants; Standard for Radon-222 Emissions from Liscensed Uranium Mill Tailings	Title
EPA, Washington, D.C., ORP	EPA Issuing Office
Abstract: Proposed rule and announcement of public hearing. This proposed standard considers alternative work practice standards . . .	Abstract
FR Federal Register notice EPA U. S. Environmental Protection Agency 10043-92-2 Radon	Descriptors

TABLE 1. CLEARINGHOUSE IDENTIFIERS FOR CHEMICAL GROUPS

Clearinghouse Identifier	Pollutant
CL-ABRAS	Abrasives
CL-ACID	Acidic compounds
CL-ADIP	Adipates
CL-ALDEHYD	Aldehydes
CL-AMINE	Amines
CL-BROM	Bromine compounds
CL-BTX	Benzene, toluene, xylene
CL-CARBON	Total carbon
CL-CFC	Chlorofluorocarbons
CL-CHC	Chlorinated hydrocarbons
CL-CARCIN	Carcinogens
CL-CHLOR	Chlorine compounds
CL-COE	Coke oven emissions
CL-CREOSOL	Creosols
CL-CUTFLU	Cutting fluids
CL-DGAEA	Diethylene gycol alkyl ethers and acetates
CL-DIESEL	Diesel fuel emissions
CL-DIISOCY	Diisocyanates
CL-DIOXIN	Dioxins
CL-ETS	Environmental tobacco smoke
CL-EXPLO	Explosives
CL-FUELOIL	Waste derived fuel oil emissions
CL-FURAN	Furans
CL-HALOME	Halomethanes
CL-HAZWAST	Hazardous wastes
CL-HCARB	Hydrocarbons
CL-IAP	Indoor air pollutants
CL-INORGAN	Inorganic compounds

TABLE 1. CLEARINGHOUSE IDENTIFIERS FOR CHEMICAL GROUPS (Continued)

Clearinghouse Identifier	Pollutant
CL-METAL	Metallic compounds
CL-MINDUST	Mineral dusts
CL-MINFIB	Mineral fibers
CL-MS	Mineral spirits
CL-NITRATE	Nitrates
CL-NITRITE	Nitrites
CL-NITROSO	Nitroso compounds
CL-NMHC	Non-methane hydrocarbons
CL-OH	Hydroxides
CL-ORGANIC	Organic compounds
CL-PAH	Polycyclic aromatic compounds
CL-PCO	Photochemical oxidants
CL-PEST	Pesticides
CL-PHENOL	Phenols
CL-PHOSPHA	Phosphates
CL-PHTH	Phthalates
CL-PLAS	Plasticizers
CL-PM	Particulate matter
CL-POM	Polycyclic organic matter
CL-RAD	Radiation
CL-RESIN	Resins
CL-SALTS	Salts
CL-SEWSLUD	Sewage sludge
CL-SOLVENT	Solvents
CL-SULFATE	Sulfates
CL-SULFIDE	Sulfides
CL-SULFITE	Sulfites
CL-SVOC	Semivolatile organic compounds

TABLE 1. CLEARINGHOUSE IDENTIFIERS FOR CHEMICAL GROUPS (Continued)

Clearinghouse Identifier	Pollutant
CL-TIN	Organic tin compounds
CL-TRS	Total reduced sulfur
CL-VEG	Vegetable oil mists
CL-VOC	Volatile organic compounds
CL-WELD	Welding fumes
CL-WOOD	Wood smoke

TABLE 2. AGENCY AND OFFICE ABBREVIATIONS*

KEY TO NATIONAL AGENCY ABBREVIATIONS

EPA	U. S. Environmental Protection Agency
IARC	International Agency for Research On Cancer
NAS	National Academy of Sciences
NCI	National Cancer Institute
NIEHS	National Institute of Environmental Health Sciences
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
WHO	World Health Organization

KEY TO EPA OFFICE ABBREVIATIONS

ASRL	Atmospheric Sciences Research Laboratory
ECAO	Environmental Criteria and Assessment Office
EMSL	Environmental Monitoring Systems Laboratory
ESRL	Environmental Sciences Research Laboratory
HWERL	Hazardous Waste Engineering Research Laboratory
IERL	Industrial Environmental Research Laboratory
MERL	Municipal Environmental Research Laboratory
OA	Office of the Administrator
OAP	Office of Air Programs
OAQPS	Office of Air Quality Planning and Standards
OAR	Office of Air and Radiation
OER	Office of Exploratory Research
OHEA	Office of Health and Environmental Assessment
OMS	Office of Mobile Sources
OMTS	Office of Monitoring and Technical Support
OPTS	Office of Pesticides and Toxic Substances
ORD	Office of Research and Development
ORP	Office of Radiation Programs
OTS	Office of Toxic Substances
WERL	Water Engineering Research Laboratory

*Reports by State and local agencies are indexed under the term "State or Local Agency." Report numbers begin with the two letter State abbreviation.

TABLE 3. KEY TO DOCUMENT TYPES

AM	Ambient Monitoring
CS	Case Study (State and Local Agencies Only)
CHIP	Chemical Hazard Information Profile (EPA Only)
CT	Control Technology
DM	Dispersion Modeling
EF	Emission Factor
EA	Exposure Assessment
ER	Accident Prevention/Emergency Response
ES	Epidemiological Study
FR	Federal Register Notices
HA	Health Assessment
IA	Indoor Air
NESHAP	National Emission Standards for Hazardous Air Pollutants
NSPS	New Source Performance Standards
OT	Other (State and Local Agencies Only)
PD	Air Toxics Program Support Document (State and Local Agencies Only)
PRA	Pre-regulatory Assessment (EPA Only)
RDG	Regulatory Development Guidance
RA	Risk Assessment
RR	Rules and Regulations
SA	Source Assessment
SS	Source Sampling
TT	Toxicity Testing

1.3 ORDERING INFORMATION

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* U.S.GPO:1984-0-447-673/1156

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PK	Package containing multiple copies
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SU	Subscription

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U.S. DEPARTMENT OF COMMERCE
National Technical Information Service
SPRINGFIELD, VA 22161

NTIS ORDER FORM

TELEPHONE ORDERS
Call (703) 487-4650

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- SHIPPING: **U.S.:** Printed reports and microfiche copies are shipped First Class Mail or equivalent.
  FOREIGN: Regular service: Printed reports and microfiche copies are shipped surface mail.
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PURCHASER: DATE: _____

Last Name _____ First Initial _____
Title _____
Company/Organization _____
Address _____
City/State/ZIP _____
Attention _____
Telephone number _____

DTIC Users Code: _____ Contract No. _ _ _ _ _ _ (Last six digits)

SHIP TO (Enter ONLY if different from purchaser):

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Attention _____
Telephone number _____

2 *Method of Payment*

☐ Charge my NTIS Deposit Account _ _ _ _ _ _-_ _

Charge my ☐ Amer. Express ☐ VISA ☐ MasterCard
Account No. _____ Exp. _____

Signature: _____
(Required to validate all orders)

☐ Check/Money order enclosed for $ _____

☐ Please bill **ADD $7.50 per Order** (See below for restrictions)†
Purchase Order No. _____
Employer Identification No. _ _ _ _ _ _ _ _ _

3 *Order Selection* (For Computer products, see reverse)

Enter NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing†† (up to 8 digits)	QUANTITY Paper Copy	QUANTITY Micro-fiche	UNIT PRICE	Foreign Air Mail	TOTAL PRICE
1. /REB						
2. /REB						
3. /REB						
4. /REB						
5. /REB						
6. /REB						
7. /REB						

☐ **OVER** - Order continued on reverse

† Billing Service: This service is restricted to U.S. addresses for an additional $7.50 per order. Your business employer identification number plus phone number of the office paying the bill are required. A late payment charge will be applied to all billings more than 30 days overdue.

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Billing Fee if required ($7.50)	
GRAND TOTAL	

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U.S DEPARTMENT OF COMMERCE
National Technical Information Service
SPRINGFIELD, VA 22161

NTIS ORDER FORM - Side 2

3 *Order Selection (Cont.)*

Enter the NTIS order number(s) (Ordering by title only will delay your order)	Customer Routing ††	QUANTITY Paper Copy	QUANTITY Micro-fiche	UNIT PRICE	Foreign Air Mail	TOTAL PRICE
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						
16.						
17.						
18.						
19.						
				Subtotal		

ENTER this amount on the other side of this form. ⇨

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If you have questions about a particular computer product, please call our Computer Products Support Group at (703) 487-4763.

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20.				
21.				
22.				
23.				
		Subtotal		

All magnetic tapes are sent air mail or equivalent service to both U.S. and foreign addresses.

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Rev. 3/1987

2.0 REPORT AND FEDERAL REGISTER NOTICE ENTRIES

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AD-A011 862/0
Identification of Environmental Carcinogens
National Cancer Institute
1974, 17 p., PC A02/MF A01

Abstract: Although approximately 6000 compounds have been tested for long term toxicity or carcinogenicity in laboratory animals, only about 3% of these have been active in animals. In humans only 20 to 30 compounds seem to be environmental carcinogens. However, in the past, it has been the unfortunate fact that the effects of most environmental carcinogens were first detected in exposed persons, rather than in laboratory animals. Therefore, it is of utmost importance both to identify any new compounds which may be carcinogenic in animals and to increase the speed, accuracy, and reliability of the physico-chemical determination of such materials - essentially a problem in analytical chemistry. Examples of possible environmental carcinogens are given.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

AD-A087 854/6
Formaldehyde - An Assessment of Its Health Effects
National Academy of Sciences
1983, 45 p., PC A03/MF A01
Publication-on-demand, $8.50

Abstract: This document is an evaluation of the effects of formaldehyde on animals, humans, and in in vitro tests, with emphasis on health risks of exposure to airborne formaldehyde at low concentrations. Consumers have complained of eye and upper respiratory tract irritation, headaches, and drowsiness, and gastrointestinal disturbances, apparently caused by offgassing of formaldehyde from urea-formaldehyde foam insulation, particle board, or plywood. Airborne concentrations of formaldehyde in homes have been reported to range from 0.01 to 31.7 ppm. An ongoing lifetime in rodent indicated there may be a carcinogenic effect of exposure to formaldehyde. A high incidence of squamous cell carcinoma in the nasomaxillary epithelium was reported in rates exposed at 15 ppm. Irritation appears to be the most sensitive response to formaldehyde. However, identification of the toxicologic reaction of greatest concern will have to await the conclusion of ongoing and planned studies. A range of irritation responses associated with exposure to various concentrations of formaldehyde was provided, but there was no evidence of a population threshold for formaldehyde's irritant effects. The Committee recommended that formaldehyde be kept at the lowest practical concentration to minimize adverse effects on public health.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
24	LUMBER AND WOOD PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
50-00-0	FORMALDEHYDE

AD-A093 809/2
Principles of Toxicological Interactions Associated with Multiple Chemical Exposures
National Academy of Sciences
1981, 207 p., PC A10/MF A01
Publication-on-demand, $19.00

Abstract: On a typical day, a U.S. Coast Guard inspector may enter confined spaces on as many as five vessels. Because each of these ships may have carried different cargoes, an inspector could be exposed to a mixture of vapors from five different chemicals. An inspector may be exposed almost daily to benzene, various nitriles, methanol, caustic soda, carbon tetrachloride, vinyl chloride, and ammonia with exposure time varying from a few minutes to 2 hours. Although permissible levels (threshold limit values) have been established for these vapors and must be attained before marine personnel can enter a confined space, the Coast Guard has become increasingly concerned about the interactions that might accrue from these exposures and possibly result in deleterious health effects. In 1978, the Coast Guard asked the National Academy of Sciences for guidance on this problem. One portion of this request called for evaluation of possible synergism among certain chemicals during chronic exposures to low concentrations. To perform this task, a Panel on Evaluation of Hazards Associated with Maritime Personnel Exposed to Multiple Cargo Vapors was formed. This report is a first attempt to assess the added hazards, if any, to marine inspectors who are occupationally exposed to multiple chemicals.

NAS	NATIONAL ACADEMY OF SCIENCES
1310-73-2	SODIUM HYDROXIDE
51	WHOLESALE TRADE-NONDURABLE GOODS
56-23-5	CARBON TETRACHLORIDE
67-56-1	METHANOL
71-43-2	BENZENE
75-01-4	VINYL CHLORIDE
7664-41-7	AMMONIA

AD-A142 133/8
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 1
National Academy of Sciences
Apr 84, 116p, PC A06/MF A01
Publication-on-demand, $13.00

Abstract: This document is one in a series prepared by the Committee that form the basis of the recommendations for EELs and CELs for selected chemicals. Since the Committee began recommending EELs and CELs for its military sponsors (U.S. Army, Navy, and Air Force), the scope of its recommendations has been expanded in response to a request by the National Aeronautics and Space Administration. The CELs, in particular, grew out of a Navy request for exposure limits for atmospheric contaminants in submarines. The EELs and CELs have been used as design criteria by the sponsors in considering the suitability of materials for particular missions (as in a submarine or a spacecraft) and in assessing the habitability of particular enclosed environments. They are recommended for narrowly defined occupational groups and are not intended for application in general industrial settings or as exposure limits for the general public.

EA	EXPOSURE ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY
9711	NATIONAL SECURITY

AD-A147 000/4/XAB
Disposal of Industrial and Domestic Wastes: Land and Sea Alternatives
National Academy of Sciences
1984, 221p, PC A10/MF A01
ISBN 0-309-03484-1, $16.50

Abstract: The workshop should be organized into eight panels: public policy, economics, risk assessment, marine sciences, biological effects, land disposal, sewage sludge, and industrial wastes. In addition to organizing the workshop, the steering committee identified information needs for assessing, for a given site and a given waste material, the options of land, sea and air disposal and the environmental, economic, and regulatory criteria for selection among those options. The workshop, entitled 'Land, Sea, and Air Options for the Disposal of Industrial and Domestic Wastes', was held January 16-21, 1983, in Napa Valley, California. The steering committee agreed that it would be potentially most productive for the workshop to consider two cases: (1) the 106-Mile Ocean Waste Disposal Site (Dumpsite 106) off the New Jersey coast, the largest U.S. ocean site for disposal of industrial wastes, and (2) the sewage sludge disposal problem in Los Angeles and Orange counties, California.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

AD-A152 230/9/XAB
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 3: Bromotrifluoromethane
National Academy of Sciences
Oct 84, 30p, PC A03/MF A01
Publication-on-demand, $8.50

Abstract: This report contains information on the physical, chemical, and toxicologic properties of CBrF3, a fire extinguishing chemical. It also contains emergency exposure limits (EELs) for 30 min and 1 hr, and contains exposure limits for 90 days. Topics discussed in this volume include: Effects on Humans, Effects on Animals, Central Nervous/System Effects, Cardiovascular Effects, Effects of Prolonged Exposure, Carcinogenicity, Mutagenicity and Teratogenicity, Pharmacokinetics, Health Effects and CBrF3 Decomposition Products and Inhalation Exposure Limits.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
75-63-8	TRIFLUORMONOBROMOMETHANE

AD-A152 471/9/XAB
Emergency and Continuous Exposure Limits for Selected Airborne Contaminants. Volume 2
National Academy of Sciences
Oct 84, 131p, PC A07/MF A01
Publication-on-demand, $14.50

Abstract: The National Research Council's Committee on Toxicology recommends emergency exposure limits (EELs), short-term public limits (STPLs), and short-term public emergency limits (SPELs--formerly called public emergency limits, or PELs) for a variety of chemicals of concern to its sponsoring agencies. This document is one in a series that form the basis of the recommendations for EELs and CELs for selected chemicals. Since the Committee began recommending EELs and CELs for its military sponsors, the scope of its recommendations has been expanded in response to requests by the U.S. Coast Guard and the National Aeronautics and Space Administration. The CELs grew out of a Navy request for exposure limits for atmospheric contaminants in submarines. The EELs and CELs have been used as design criteria by the sponsors in considering the suitability of materials for particular missions (as in a submarine or a spacecraft) and in assessing the habitability of particular enclosed environments. They are recommended for narrowly defined occupational groups and are not intended for application in general industrial settings or as exposure limits for the general public. This report provides a short review of the chemical and physical properties of these chemicals and their toxic potential in animals and humans.

EA	EXPOSURE ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY
9711	NATIONAL SECURITY

CA0385001
Draft Report to the Legislature on the Air Pollution Impact of Hazardous Waste Incineration: 3 volumes
California Air Resources Board
SOUTH COAST AIR QUALITY MA. \GEMENT DISTRICT
01/01/83, 332 pages

Three volumes are:

Final Report	Dec. 1983	64 pages
Final Technical Support Document	Dec. 1983	91 pages

SA	SOURCE ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

CA0385002
Assessment of the Volatile and Toxic Organic Emissions from Hazardous Waste Disposal in California
California Air Resources Board
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
02/01/82, 158 pages

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
SA	SOURCE ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY

CA0385003
Status Report Regarding the Toxic Air Contaminants Program
California Air Resources Board
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
01/01/85, 55p pages

PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC	STATE OR LOCAL AGENCY

CA0385004
CARB/SCAQMD
Southern California Hazardous Waste Incineration: A Feasibility Study
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
05/01/84, 300 pages

SA	SOURCE ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

CA0385005
Population Exposure to Benzene Emissions from Refineries and Synthesis Plants in the South Coast Air Basin
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
C. Marlia, C. Liu, Y. Huang, D. Shikiya, J. Broadbent, S. Yan
12/01/85, 42p pages

This study was conducted to estimate the population exposure to benities in the South Coast Air Basin.
The ISCLT model of the EPA UNAMAP series was used in the coastal and central basin area. Detailed population data obtained from the U.S. Census Bureau were processed and used to determine the population exposure from these predicted concentrations.
The model predicted annual average benzene concentrations resulting from emissions from the studied sources range from 0.001 to 0.22 ppb. The total benzene exposure estimate is 58,700 ppb-persons. The risks involved range from one in thirty thousand near the facilities to one in seven million in the inland areas.

RA	RISK ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

CA0385006
South Coast Air Basin Accidental Toxic Air Emissions Study
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
E. Calafato, R. Antonoplis, I. Yen
09/01/85, 87p pages

This study is an assessment of the (a) ability of the petrochemical and (b) ability of the four counties (Los Angeles, Orange, Riverside and San Bernardino) to respond in a timely and effective manner, if such a disaster did occur.
Manufacturing, processing and storage facilities, and waste treatment storage and disposal sites were surveyed to determine the types and quantities of toxic substances stored, processed or otherwise used by other companies. Officials of the four counties responsible for disaster preparedness were interviewed and participated in group discussions. Research studies and technical papers relating to natural and man-made disasters provide the basis of community preparedness.

ER	ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES
STATE/LOC	STATE OR LOCAL AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

CA0385007
Rule 1150.1 Control of Gaseous Emissions from Active Landfills
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Linda Basilio, Larry Bowen
04/05/85, 4p pages

This rule prohibits the operation of active landfills with a landfill quires determination of efficiencies of the disposal system of the collected landfill gas.
A schedule is provided to achieve compliance by January 1, 1989. Applicable filing and evaluation fees pursuant to other District rules are included, as well as exemptions and applicability of other rules.

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

CA0385008
Rule 1150.2 Control of Gaseous Emissions from Inactive Landfills
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Linda Basilo, Larry Bowen
10/18/85, 4p pages

CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
STATE/LOC	STATE OR LOCAL AGENCY

CA0485001
Controlling Volatile Organic Compound Emissions from Organic Chemical Manufacturing Plants through Parallel Bed Carbon Adsorption.
SACRAMENTO CO. AIR POLLUTION CONTROL DISTRICT
Eric Skelton
06/12/85, 11p pages

CT	CONTROL TECHNOLOGY DOCUMENT
STATE/LOC	STATE OR LOCAL AGENCY
107-06-2	ETHYLENE DICHLORIDE
67-66-3	CHLOROFORM

CA13AMADOR-1
AMADOR COUNTY AIR POLLUTION CONTROL DISTRICT RULES AND REGULATIONS
AMADOR COUNTY AIR POLLUTION CONTROL DISTRICT
01/01/81, 64 pages

Abstract:

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

CHIP
Chemical Hazard Information Profiles
EPA, Washington, D.C., OPTS
Various Dates, Length Varies, Free

Abstract: Chemical Hazard Information Profiles (CHIP), prepared by EPA's Office of Pesticides and Toxic Substances (OPTS), are brief summaries of readily available information concerning the health and environmental effects and potential exposure to specific chemicals. OPTS chooses chemicals for CHIP preparation on the basis of information indicating a potential for adverse health or environmental effects and evidence of significant production or some type of exposure. Information gathering for a CHIP is generally limited to a search of secondary literature sources and unpublished information about the selected chemicals from individuals and companies. The search is not intended to be exhaustive, although in-depth searches on specific topics may be done on a case-by-case basis. In general, no attempt is made to evaluate or validate information at this stage of assessment. Preparation of a CHIP is part of the first stage in the OPTS chemical risk assessment process. A list of individual CHIPs by subject appears below. For more detailed information or to obtain a copy of any of the available CHIPs, contact: TSCA Industry Assistance Office (TAO) (TS-799); U.S. Environmental Protection Agency; Washington, D.C. 20460; (202) 554-1404.

CL-AMINE	AMINES
CL-BROM	BROMINE COMPOUNDS
CL-CUTFLU	CUTTING FLUIDS
CL-EXPLO	EXPLOSIVES
CL-NITROSO	NITROSO COMPOUNDS
CL-PHENOL	PHENOLS
CL-PHTH	PHTHALATES
CL-PLAS	PLASTICIZERS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
100-00-5	CHLORONITROBENZENE,4-
100-21-0	TEREPHTHALIC ACID
100-40-3	VINYLCYCLOHEXENE,4-
100-44-7	BENZYL CHLORIDE
100-75-4	N-NITROSOPIPERIDINE
100-99-2	ALUMINUM, TRIISOBUTYL-
10022-60-3	DI(2-ETHYLBUTYL) ADIPATE
10039-54-0	HYDROXYLAMINE, SULFATE (2:1) (SALT)
10043-01-3	SULFURIC ACID, ALUMINUM SALT (3:2)
10043-67-1	SULFURIC ACID, ALUMINUM POTASSIUM SALT
10046-00-1	HYDROXYLAMINE, SULFATE (1:1) (SALT)
101-02-0	TRIPHENYL PHOSPHITE
101-14-4	CURENE
101-25-7	1,3,5,7-TETRAAZABICYCLO[3.3.1]NONANE, 3,
101-61-1	METHYLENEDIMETHYLANILINE,4,4'-,BIS,N
101-68-8	DIPHENYLMETHANEDIISOCYANATE,4,4'-

CHIP (continued)

101-80-4	OXYDIANILINE,4,4'-
101-83-7	DICYCLOHEXYLAMINE
10102-24-6	SILICIC ACID, (H2SIO3), DILITHIUM SALT
10102-71-3	ALUMINUM SODIUM SULFATE, (NAAL(SO4)2)
102-71-6	TRIETHANOLAMINE
103-11-7	ETHYLHEXYLACRYLATE,2-
103-23-1	ETHYLHEXYLADRPATS,2-
103-33-3	AZOBENZENE
103-45-7	ACETIC ACID, PHENETHYL ESTER
10377-51-2	LITHIUM IODIDE
104-40-5	PHENOL, P-NONYL-
10436-39-2	1-PROPENE, 1,1,2,3-TETRACHLORO-
105-97-5	HEXANEDIOIC ACID, DIDECYL ESTER
105-99-7	HEXANEDIOIC ACID, DIBUTYL ESTER
106-19-4	HEXANEDIOIC ACID, DIPROPYL ESTER
106-48-9	CHLOROPHENOL,P-
106-50-3	PHENYLENEDIAMINE,P-
106-93-4	ETHYLENE DIBROMIDE
106-99-0	BUTADIENE,1,3-
107-02-8	ACROLEIN
107-04-0	ETHANE, 1-BROMO-2-CHLORO-
107-05-1	CHLOROPROPENE,3-
107-06-2	ETHYLENE DICHLORIDE
107-12-0	PROPIONITRILE
107-15-3	ETHYLENEDIAMINE
107-87-9	N-METHYL PROPYL KETONE
108-05-4	VINYL ACETATE
108-31-6	MALEIC ANHYDRIDE
108-43-0	CHLOROPHENOL,M-
108-45-2	PHENYLENEDIAMINE,M-
108-60-1	CHLOROMETHYLETHYLETHER,BIS,2-,1-
108-78-1	MELAMINE
108-80-5	CYANURIC ACID
108-87-2	METHYLCYCLOHEXANE
108-88-3	TOLUENE
108-89-4	METHYLPYRIDINE,4-
108-91-8	CYCLOHEXYLAMINE
108-99-6	PICOLINE,BETA-
109-06-8	METHYLPYRIDINE,2-
109-86-4	METHOXYETHANOL,2-
109-89-7	DIETHYLAMINE
109-99-9	TETRAHYDROFURAN
110-29-2	HEXANEDIOIC ACID, DECYL OCTYL ESTER
110-32-7	DI(2-HEXYLOXYETHYL)ADIPATE
110-43-0	METHYL N-AMYL KETONE
110-49-6	ETHYLENE GLYCOL METHYL ETHER ACETATE
110-54-3	HEXANE,N-
110-57-6	2-BUTENE, 1,4-DICHLORO-, (E)-
110-80-5	ETHOXYETHANOL,2-
110-91-8	MORPHOLINE

CHIP (continued)

111-15-9	ETHOXYETHYLACETATE,2-
111-24-0	PENTANE, 1,5-DIBROMO-
111-42-2	DIETHANOLAMINE
111-46-6	DIETHYLENE GLYCOL
111-96-6	METHOXYETHYLETHER,BIS,2-
11121-16-7	BORIC ACID, ALUMINUM SALT
1116-54-7	N-NITROSODIETHANOLAMINE
1116-76-3	TRIOCTYLAMINE
112-24-3	TRIETHYLENETETRAMINE
117-79-3	AMINOANTHRAQUINONE,2-
117-81-7	ETHYLHEXYLPHTHALATE,BIS,2-
117-82-8	PHTHALIC ACID, DI(METHOXYETHYL) ESTER
117-83-9	PHTHALIC ACID, BIS(2-BUTOXYETHYL) ESTER
117-84-0	DI-N-OCTYL PHTHALATE
118-79-6	TRIBROMOPHENOL,2,4,6-
118-96-7	TRINITROTOLUENE,2,4,6-
119-06-2	DITRIDECYL PHTHALATE
119-07-3	N-OCTYL N-DECYL PHTHALATE
1191-15-7	ALUMINUM, HYDRODIISOBUTYL-
120-78-5	DITHIOBENZOTHIAZOLE,2,2'-,BIS
120-83-2	DICHLOROPHENOL,2,4-
12005-16-2	ALUMINATE, SODIUM
12007-60-2	BORIC ACID, (H2B4O7), DILITHIUM SALT
12057-24-8	LITHIUM OXIDE
12068-56-3	ALUMINUM OXIDE SILICATE, (AL6O(SIO6)2)
121-14-2	DINITROTOLUENE,2,4-
121-44-8	TRIETHYLAMINE
121-45-9	TRIMETHYL PHOSPHITE
12108-13-3	METHYLCYCLOPENTADIENYL MANGANESE TRICARB
122-60-1	PHENYL GLYCIDYL ETHER
122-66-7	HYDRAZOBENZENE
123-30-8	AMINOPHENOL,P-
123-79-5	HEXANEDIOIC ACID, DIOCTYL ESTER
123-91-1	DIOXANE,1,4-
124-09-4	DIAMINOHEXANE,1,6-
124-40-3	DIMETHYLAMINE
126-33-0	THIOPHENE, TETRAHYDRO-, 1,1-DIOXIDE
126-71-6	PHOSPHORIC ACID, TRIISOBUTYL ESTER
12656-43-8	ALUMINUM CARBIDE
128-37-0	BUTYLATED HYDROXYTOLUENE
129-79-3	FLUOREN-9-ONE, 2,4,7-TRINITRO-
1309-64-4	ANTIMONY OXIDE
131-11-3	DIMETHYL PHTHALATE
131-15-7	PHTHALIC ACID, BIS(1-METHYLHEPTYL) ESTER
131-17-9	DIALLYL PHTHALATE
1310-65-2	LITHIUM HYDROXIDE
1314-20-1	THORIUM DIOXIDE
1318-00-9	VERMICULITE
1318-16-7	BAUXITE
132-32-1	AMINOETHYLCARBAZOLE,3-,9-

CHIP (continued)

1321-38-6	TOLUENE DIISOCYANATE
1327-36-2	ALUMINOSILICATE
1327-41-9	ALUMINUM CHLORIDE HYDROXIDE
1330-86-5	ADIPIC ACID, DIISOOCTYL ESTER
1333-86-4	CARBON BLACK
1338-23-4	BUTANONEPEROXIDE,2-
1344-28-1	ALUMINUM OXIDE
13453-69-5	BORIC ACID, (HBO2), LITHIUM SALT
13473-90-0	NITRIC ACID, ALUMINUM SALT
13494-80-9	TELLERIUM AND COMPOUNDS, AS TE
136-83-4	PHENOL, O-NONYL-
13674-87-8	DICHLOROPROPYLPHOSPHATE,TRIS,1,3-,2-
137-30-4	ZIRAM
13771-22-7	ALUMINUM BOROHYDRIDE
139-12-8	ACETIC ACID, ALUMINUM SALT
140-11-4	BENZYL ACETATE
140-88-5	ETHYL ACRYLATE (INHIBITED)
141-04-8	HEXANEDIOIC ACID, BIS(2-METHYLPROPYL EST
141-17-3	HEXANEDIOIC ACID,BIS(2-(2-BUTOXYETHYL)ET
141-28-6	HEXANEDIOIC ACID, DIETHYL ESTER
141-43-5	MONOETHANOLAMINE
142-03-0	ALUMINUM, BIS(ACETATO)HYDROXY-
142-28-9	PROPANE, 1,3-DICHLORO-
1429-50-1	PHOSPHONIC ACID, UETHYLENEBIS(NITRILODIM
146-50-9	DIISOHEXYL PHTHALATE
1476-11-5	2-BUTENE, 1,4-DICHLORO-, (Z)-
14808-60-7	QUARTZ (SILICA DUST)
151-32-6	HEXANEDIOIC ACID, DINONYL ESTER
15477-33-5	ALUMINUM CHLORATE
16853-85-3	ALUMINATE(1-), TETRAHYDRO-, LITHIUM, (T-
16941-10-9	ALUMINUM CALCIUM HYDRIDE
17557-23-2	NEOPENTYL GLYCOL DIGLYCIDYL ETHER
18917-91-4	ALUMINUM, TRIS(2-HYDROXYPROPANOATO-01,02
20227-92-3	CARBONATE
20736-64-5	CHROMATE
21645-51-2	ALUMINUM HYDROXIDE
2223-82-7	ACRYLIC ACID, 2,2-DIMETHYLTRIMETHYLENE E
2244-21-5	TRIAZINE 2,4,6(1H,3H,5H)TRIONE, 1,3-DICH
22707-35-3	N-HEXYL N-DECYL ADIPATE
23413-80-1	ALUMINUM, BIS(ACETYL SALICYLATE)
2432-99-7	AMINOUNDECANOIC ACID,11-
24458-48-8	ANILINE, N-(2-METHYL-2-NITROPROPYL)-P-NI
2465-27-2	AURAMINE
25101-03-5	ADIPIC ACID, POLYESTER WITH 1,2-PROPANED
25154-52-3	PHENOL, NONYL-
2524-03-0	PHOSPHOROCHLORIDOTHIOIC ACID, O,O-DIMETH
2524-04-1	PHOSPHOROCHLORIDOTHIOIC ACID, O,O-DIETHY
2551-62-4	SULFUR HEXAFLUORIDE
25724-58-7	PHTHALIC ACID, DECYL HEXYL ESTER
2624-17-1	SODIUM CYANURATE

CHIP (continued)

26447-40-5	BENZENE, 1,1'-METHYLENEBISUISOCYANATO-
26471-62-5	TOLUENE DIISOCYANATE
2650-18-2	BRILLIANT BLUE FCF SALTS
26628-22-8	SODIUM AZIDE
26761-40-0	DIISODECYL PHTHALATE
27178-16-1	ADIPIC ACID, DIISODECYL ESTER
27215-22-1	PHTHALIC ACID, BENZYL ISOOCTYL ESTER
27554-26-3	DIISOCTYLPHTHALATE
2782-57-2	DICHLOROISOCYANURIC ACID
280-57-9	1,4-DIAZABICYCLOU2.2.2eOCTANE
2832-40-8	DISPERSE YELLOW 3
28553-12-0	DIISONONYL PHTHALATE
2893-78-9	DICHLOROISOCYANURIC ACID, SODIUM SALT
29082-74-4	OCTACHLOROSTYRENE
29082-75-5	BENZENE,PENTACHLORO(2,3-DICHLOROETHENYL)
29086-39-3	BENZENE, PENTACHLORO(1,2-DICHLOROETHENYL
302-17-0	CHLORAL HYDRATE
3033-77-0	AMMONIUM, (2,3-EPOXYPROPYL)TRIMETHYL-, C
3083-25-8	EPOXYTRICHLOROBUTANE,1,2-,4,4,4-
3120-74-9	M-CRESOL, 4-(METHYLTHIO)-
3129-92-8	BENZOIC ACID, COMPD. WITH CYCLOHEXYLAMIN
3294-03-9	PHENOL, 2,2'-THIOBISU4-(1,1,3,3-TETRAMET
3327-22-8	AMMONIUM, (3-CHLORO-2-HYDROXYPROPYL)TRIM
3333-52-6	TETRAMETHYLSUCCINONITRILE
3388-04-3	SILANE, TRIMETHOXYU2-(7-OXABICYCLOU4.1.0
3389-71-7	2,5-NORBORNADIENE, 1,2,3,4,7,7-HEXACHLOR
34067-50-0	4-NITROBENZOATE
34139-62-3	3-NITROBENZOATE
3648-20-2	DIUNDECYL PHTHALATE
3818-54-0	M-CRESOL, 4,4'-THIOBISU5-TERT-BUTYL-
382-10-5	PROPENE, 3,3,3-TRIFLUORO-2-(TRIFLUOROMET
3844-45-9	C.I. ACID BLUE 9, DISODIUM SALT
3882-06-2	DICYCLOHEXYLAMINE NITRATES
479-73-2	C.I. BASIC RED 9 MONOHYDROCHLORIDE
492-80-8	AURAMINE
495-54-5	2,4-DIAMINOAZOBENZENE
50-00-0	FORMALDEHYDE
51-19-4	O-AMINOPHENOL HYDROCHLORIDE
51-28-5	DINITROPHENOL,2,4-
51-78-5	P-AMINOPHENOL HCL
51-79-6	URETHANE
5160-02-1	D&C RED 9
5216-25-1	TETRACHLOROTOLUENE,A,A,A,P-
532-82-1	BASIC ORANGE002,C.I.
5334-09-8	PHTHALIC ACID, CYCLOHEXYL ISOBUTYL ESTER
534-13-4	UREA, 1,3-DIMETHYL-2-THIO-
53609-64-6	NITROSODIISOPROPANOLAMINE
546-89-4	ACETIC ACID, LITHIUM SALT
5470-11-1	HYDROXYLAMINE HYDROCHLORIDE
5473-16-5	3,5-DINITROBENZOATE

CHIP (continued)

548-62-9	HEXAMETHYL-P-ROSANILINE CHLORIDE
55-18-5	N-NITROSODIETHYLAMINE
552-30-7	TRIMELLITIC ANHYDRIDE
554-13-2	CARBONIC ACID, DILITHIUM SALT
555-31-7	2-PROPANOL, ALUMINUM SALT
555-35-1	PALMITIC ACID, ALUMINUM SALT
555-75-9	ALUMINUM ETHOXIDE
556-63-8	FORMIC ACID, LITHIUM SALT
557-91-5	ETHANE, 1,1-DIBROMO-
56-23-5	CARBON TETRACHLORIDE
563-47-3	CHLOROMETHYLPROPENE,3-,2-
569-61-9	PARAROSANILINE HYDROCHLORIDE
57-56-7	SEMICARBAZIDE
576-24-9	DICHLOROPHENOL,2,3-
584-84-9	TOLUENE,24,DIISOCYANATE
591-78-6	HEXANONE,2-
593-60-2	VINYL BROMIDE
593-92-0	VINYLIDENE BROMIDE
594-34-3	PROPANE, 1,2-DIBROMO-2-METHYL-
60-12-8	PHENETHYL ALCOHOL
61255-81-0	BENZENE,ETHENYL-,HEPTACHLOR,DERIV
614-00-6	ANILINE, N-METHYL-N-NITROSO-
61593-44-0	BENZENE, PENTACHLORO(DICHLOROETHENYL)
61702-81-6	1,2-BENZENEDICARBOXYLIC ACID, HEXYL ISOD
61789-51-3	NAPHTHENIC ACIDS, COBALT SALTS
61886-60-0	1,2-BENZENEDICARBOXYLIC ACID, ISODECYL T
62-53-3	ANILINE
62-56-6	THIOUREA
62-75-9	N-NITROSODIMETHYLAMINE
621-64-7	N-NITROSO-N-PROPYLAMINE
627-93-0	ADIPIC ACID, DIMETHYL ESTER
63084-98-0	P-AMINOPHENOL SO4
636-21-5	TOLUIDINEHYDROCHLORIDE,O-
64741-66-8	NAPHTHA, (PETROLEUM), LIGHT ALKYLATE
64742-88-7	SOLVENT NAPHTHA, (PETROLEUM), MEDIUM ALI
67-56-1	METHANOL
67-63-0	ISOPROPANOL
67-72-1	HEXACHLOROETHANE
67845-79-8	O-AMINOPHENOL SULFATE
67953-54-2	GUANIDINE, CYANO-, POLYMER WITH N-(2-AMI
68-12-2	DIMETHYLFORMAMIDE,N,N-
680-31-9	HEXAMETHYLPHOSPHORAMIDE
68188-96-5	PHOSPHONIC ACID, U1,2-ETHANEDIYLBISUNITR
684-16-2	HEXAFLUOROACETONE
684-93-5	N-NITROSO-N-METHYLUREA
688-37-9	ALUMINUM OLEATE
71-23-8	PROPYL ALCOHOL
7379-51-3	3,5-XYLENOL, 4-(METHYLTHIO)-
74-83-9	METHYL BROMIDE
74-87-3	METHYL CHLORIDE

CHIP (continued)

74-89-5	MONOMETHYLAMINE
74-96-4	ETHYL BROMIDE
7429-90-5	ALUMINUM
7439-93-2	LITHIUM
7446-70-0	ALUMINUM CHLORIDE
7447-41-8	LITHIUM CHLORIDE
75-00-3	CHLOROETHANE
75-01-4	VINYL CHLORIDE
75-02-5	VINYL FLUORIDE
75-04-7	MONOETHYLAMINE
75-05-8	ACETONITRILE
75-07-0	ACETALDEHYDE
75-09-2	METHYLENE CHLORIDE
75-12-7	FORMAMIDE
75-21-8	ETHYLENE OXIDE
75-25-2	BROMOFORM
75-38-7	VINYLIDENE FLUORIDE
75-44-5	PHOSGENE
75-45-6	CHLORODIFLUOROMETHANE
75-50-3	TRIMETHYLAMINE
75-87-6	CHLORAL
75-91-2	BUTYLHYDROPEROXIDE,TERT-
7550-35-8	LITHIUM BROMIDE
756-79-6	DIMETHYL METHYLPHOSPHONATE
7580-67-8	LITHIUM HYDRIDE
759-73-9	ETHYLNITROSOUREA,1-,1-
76-01-7	PENTACHLOROETHANE
764-41-0	DCB
77-47-4	HEXACHLOROCYCLOPENTADIENE
7782-89-0	LITHIUM AMIDE
7784-18-1	ALUMINUM FLUORIDE
7784-21-6	ALUMINUM HYDRIDE, (ALH3)
7784-25-0	SULFURIC ACID, ALUMINUM AMMONIUM SALT (2
7784-26-1	SULFURIC ACID, ALUMINUM AMMONIUM SALT (2
7784-30-7	PHOSPHORIC ACID, ALUMINUM SALT (1:1)
7789-24-4	LITHIUM FLUORIDE
7790-07-0	DI(2-(2-ETHYLBUTOXY))ETHYL ADIPATE
7790-69-4	NITRIC ACID, LITHIUM SALT
78-40-0	TRIETHYL PHOSPHATE
78-42-2	ETHYLHEXYLPHOSPHATE,TRIS,2-
78-51-3	TRIBUTOXYETHYL PHOSPHATE
78-75-1	DIBROMOPROPANE,1,2-
78-83-1	ISOBUTYL ALCOHOL
7803-49-8	HYDROXYLAMINE
79-00-5	TRICHLOROETHANE,1,1,2-
79-02-7	DICHLOROACETALDEHYDE
79-10-7	ACRYLIC ACID
79-27-6	ACETYLENE TETRABROMIDE
79-34-5	TETRACHLOROETHANE,1,1,2,2-
79-46-9	NITROPROPANE,2-

CHIP (continued)

7926-95-6	BROMINE
80-05-7	BISPHENOL A
80-15-9	CUMENE HYDROPEROXIDE
81-88-9	RHODANINE B
828-00-2	DIMETHOXANE
84-61-7	DICYCLOHEXYL PHTHALATE
84-64-0	BUTYL CYCLOHEXYL PHTHALATE
84-66-2	DIETHYL PHTHALATE
84-69-5	DIISOBUTYL PHTHALATE
84-72-0	ETHYL PHTHALYL ETHYL GLYCOLATE
84-74-2	DI-N-BUTYL PHTHALATE
84-75-3	DI-N-HEXYL PHTHALATE
84-76-4	1,2-BENZENE DICARBOXYLIC ACID,DINONYL ES
84-78-6	PHTHALIC ACID, BUTYL OCTYL ESTER
849-99-0	ADIPIC ACID, DICYCLOHEXYL ESTER
85-41-6	PHTHALIMIDE
85-68-7	BUTYL BENZYL PHTHALATE
85-69-8	PHTHALIC ACID, BUTYL 2-ETHYLHEXYL ESTER
85-70-1	PHTHALIC ACID, BUTYL ESTER, ESTER WITH B
85-71-2	METHYL PHTHALYL ETHYL GLYCOLATE
86-30-6	N-NITROSODIPHENYLAMINE
868-85-9	DIMETHYL HYDROGENPHOSPHITE
87-65-0	DICHLOROPHENOL,2,6-
87-84-3	PENTABROMOCHLOROCYCLOHEXANE
87-90-1	S-TRIAZINE-2,4,6(1H,3H,5H)-TRIONE, 1,3,5
88-73-3	CHLORONITROBENZENE,2-
89-13-4	PHTHALIC ACID, 2-ETHYLHEXYL 8-METHYLNONY
89-19-0	N-BUTYL N-DECYL PHTHALATE
89939-09-3	STYRENE,A,B,B,2,3,4,5-HEPTACHLORIDE
90-66-4	P-CRESOL, 2,2'-THIOBIS(6-TERT-BUTYL-
9005-64-5	SORBITAN, MONODODECANOATE, POLY(OXY-1,2-
9016-87-9	ISOCYANIC ACID, POLYMETHYLENEPOLYPHENYLE
91-08-7	TOLUENEDIISOCYANATE,2,6-
91-22-5	QUINOLINE
92-52-4	BIPHENYL
930-55-2	NITROSOPYRROLIDINE,1-
939-97-9	BENZALDEHYDE, P-TERT-BUTYL-
94-58-6	BENZENE, 1,2-(METHYLENEDIOXY)-4-PROPYL-
947-92-2	2-NITROSODOCYCLOHEXYL
95-53-4	TOLUIDINE,O-
95-54-5	PHENYLENEDIAMINE,O-
95-55-6	AMINOPHENOL,O-
95-57-8	CHLOROPHENOL,O-
95-59-0	P-DIOXANE, 2,3-DICHLORO-
95-80-7	DIAMINOTOLUENE,2,4-
96-09-3	STYRENE OXIDE
96-12-8	DIBROMOCHLOROPROPANE,1,2-,3-
96-24-2	CHLOROPROPANEDIOL,3-,1,2-
96-66-2	1,2-PROPANEDIOL, 3-CHLORO
96-69-5	THIOBUTYLCRESOL,4,4'-,BIS,6-TERT,M-

CHIP (continued)

97-00-7	BENZENE, 1-CHLORO-2,4-DINITRO-
97-93-8	ALUMINUM, TRIETHYL-
98-07-7	BENZOTRICHLORIDE
98-51-1	P-TERT-BUTYL TOLUENE
98-73-7	BENZOIC ACID, P-TERT-BUTYL-
98-87-3	BENZAL CHLORIDE
98-88-4	BENZOYL CHLORIDE
98-95-3	NITROBENZENE
99-55-8	NITROTOLUIDINE,5-,O-
99-59-2	NITROANISIDINE,5-,O-

CRA

Cancer Risk Assessments

EPA, WASHINGTON, DC, OHEA DATES VARY, LENGTHS VARY, FREE

Abstract: During the period 1977 through 1980, cancer risk assessments were prepared for the chemicals listed below by the Carcinogen Assessment Group, located in the EPA Office of Health and Environmental Assessment. Most of these assessments are preliminary, and updating and revisions could substantially alter the unit risk information. Several risk assessments have been revised and updated and are contained in the health assessment document series. These assessments are listed in both the Document Type Index and the Pollutant/Name/Class Index. The risk assessments for acetaldehyde, benzyl chloride, maleic anhydride, phosgene and xylenes are in the process of being updated as part of OHEA's health assessment activities and will be available in draft form after they have been completed. Single copies of the preliminary assessments (listed below) are available to state and local air pollution control agencies. Requests should be made in writing to: Technical Information Staff (RD-689), Office of Health and Environmental Assessment, U.S. Environmental Protection Agency, 401 M Street, S. W.; Washington, D.C. 20460.

CL-CARCIN	CARCINOGENS
CL-CREOSOL	CREOSOLS
CL-NITROSO	NITROSO COMPOUNDS
CL-PON	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
RA	RISK ASSESSMENT
100-44-7	BENZYL CHLORIDE
106-93-4	ETHYLENE DIBROMIDE
107-05-1	CHLOROPROPENE,3-
108-31-6	MALEIC ANHYDRIDE
1330-20-7	XYLENE
50-00-0	FORMALDEHYDE
71-43-2	BENZENE
74-88-4	IODOMETHANE
75-01-4	VINYL CHLORIDE
75-07-0	ACETALDEHYDE
75-44-5	PHOSGENE
98-95-3	NITROBENZENE

CT01-CTDEP-1
"DECISION-MAKING PROCESS USED IN THE DEVELOPMENT OF CT'S HAP CONTROL PROGRAM"
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
BRUCKMAN, L., RUBINO, R., GOVE, J.
01/01/87, 10. pages

CT'S HAP PROGRAM WAS DEVELOPED THROUGH THE ACTIVITY AND INPUTS OF VARIOUS GROUPS--BUSINESS INTERESTS, AGENCY STAFF, OTHER GOVERNMENTAL AGENCIES, ENVIRONMENTAL ADVOCACY GROUPS, THE LEGISLATURE, AND THE GENERAL PUBLIC. THE ROLES OF EACH OF THESE GROUPS IN THE DEVELOPMENT OF THE PROGRAM IS DISCUSSED.

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

CT01-CTDEP-2
"CT'S APPROACH TO CONTROLLING TOXIC AIR POLLUTANTS"
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
BRUCKMAN, L., RUBINO, R., GOVE, J.
10/01/86, 30. pages

THE FOLLOWING ARE DISCUSSED: LIST OF POLLUTANTS, CONNECTICUT'S UNIQUE 2-PHASE SYSTEM FOR SETTING AMBIENT STANDARDS, CT'S INNOVATION PROCEEDURE FOR DETERMINING MAXIMUM ALLOWABLE STACK CONCENTRATIONS FOR POLLUTANTS, PROGRAM IMPLEMENTATION, AND THE DECISION-MAKING STRUCTURE USED IN STRUCTURING THE PROGRAM.

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

CT01-CTDEP-3
"CT'S PROGRAM FOR AIR MONITORING THROUGH BIOASSAYS"
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
BRUCKMAN, L., SANYAL, M., RUBINO, R., GOVE, J., MCKINLEY, T.

THE CT DEPARTMENT OF ENVIRONMENTAL PROTECTION, WORKING WITH SCIENTISTS FROM YALE UNIVERSITY, IS DEVELOPING AN INNOVATIVE PROCEDURE FOR DETERMINING THE LEVEL OF MUTAGENIC SUBSTANCES IN THE AIR. AIR SAMPLES WILL BE TAKEN AT VARIOUS LOCATIONS AND THE PARTICULATES FILTERED OUT AND SEMIVOLATILE HYDROCARBON VAPORS CONDENSED. THESE MATERIALS WILL THEN BE TESTED FOR THEIR MUTAGENIC AND CARCINOGENIC POTENCY IN APPROPRIATE ANIMAL SPECIES BY USE OF A NUMBER OF HIGHLY SENSITIVE TEST SYSTEMS. THE DATA GENERATED BY THESE TESTS WILL HELP DEP IN ITS EFFORTS TO IDENTIFY AREAS HAVING SEVERE CARCINOGENIC AIR QUALITY PROBLEMS AND WILL HELP TO IDENTIFY SOURCES CONTRIBUTING THE MOST TO THOSE PROBLEMS.

AM AMBIENT MONITORING
STATE/LOC STATE OR LOCAL AGENCY

CT01-CTDEP-4
HAZARDOUS AIR POLLUTANT CONTROL PROGRAM
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
GOVE, J.
250 pages

A COMPILATION OF DOCUMENTS, INCLUDING THE REGULATIONS; THE PROGRAM NARRATIVE(DESCRIBING BACKGROUND AND FEATURES OF THE PROGRAM); INSTRUCTIONS TO OWNERS AND OPERATORS OF SOURCES(A GUIDE TO THE PROGRAM REQUIREMENTS, SO THEY CAN DETERMINE ITS APPLICABILITY TO THEIR OPERATIONS); MEMORANDA OF UNDERSTANDING AMONG DEP, THE HAZARDOUS AIR POLLUTANT ADVISORY PANEL, AND DEPARTMENT OF HEALTH SERVICES; RESPONSES TO COMMENTS MADE AT PUBLIC HEARINGS HELD FOR THE PROGRAM; THE FY87 BUDGET; A LIST OF MEMBERS OF THE HAP ADVISORY PANEL; AND DRAFT CHANGES TO BE MADE IN THE REGULATIONS THA APPLY TO DRY CLEANERS.

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

CT01-CTDEP-5
"MULTIPLE-PATHWAY EXPOSURE ASSESSMENT(FOR DIOXIN AND FURANS)"
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
FRED C. HART AND ASSOCIATES
02/01/87, 500 pages

POLYCHLORINATED DIBENZO-P-DIOXINS AND POLYCHLORINATED DIBENZO FURANS ARE A GROUP OF CHLORINATED ORGANIC COMPOUNDS THAT ARE COLLECTIVELY REFERRED TO AS "DIOXINS". CERTAIN DIOXIN COMPOUNDS HAVE TOXIC AND CARCINOGENIC PROPERTIES AND ONE COMPOUND, 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD) IS VERY TOXIC AND IS SUSPECTED TO BE A HUMAN CARCINOGEN. SINCE THIS IS THE ISOMER OF MOST CONCERN, THE AVAILABLE LITURATURE FOCUSES PRIMARILY ON THIS ISOMER.
THIS REPORT PROVIDES A THOROUGH REVIEW OF THE LITERATURE AVAILABLE CONCERNING HEALTH EFFECTS OF DIOXINS. ONE OF THE LIMITATIONS OF THE HEALTH ASSESSMENT IS THE LACK OF HEALTH EFFECTS INFORMATION ON THE NUMEROUS DIOXIN COMPOUNDS OTHER THAN 2,3,7,8-TCDD. ALSO, THE LACK OF INFORMATION CONCERNING LOW-DOSE EXPOSURE OF HUMANS TO DIOXINS AND THE USE OF HIGH-DOSE EXPOSURES ON LABORATORY ANIMALS EXTRAPOLATED TO LOW-DOSE EXPOSURES ON HUMANS RESULTS IN THE USE OF ASSUMPTIONS TO ASSESS HUMAN HEALTH EFFECTS. THESE ASSUMPTIONS GENERALLY ERR ON THE CONSERVATIVE SIDE WHEN ASSESSING CHRONIC LONG-TERM HEALTH EFFECTS OF THE LOW-LEVEL DIOXIN EXPOSURE FROM A WELL-DESIGNED AND OPERATED COMBUSTION EMISSION SOURCE OVER A LONG PERIOD OF TIME.

RA RISK ASSESSMENT
STATE/LOC STATE OR LOCAL AGENCY

CT01-CTDEP-6
"TETRACHLOROETHYLENE QUANTITATIVE RISK ASSESSMENT DOCUMENT"
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
HARI RAO, OF CT DEPARTMENT OF HEALTH SERVICES
03/01/87, 25. pages

TETRACHLOROETHYLENE (PCE) IS A CHLORINATED SOLVENT WIDELY USED IN DRY CLEANING AND DEGREASING OPERATIONS. INHALATION IS THE PRINCIPAL ROUTE OF CONCERN BY WHICH HUMANS ARE EXPOSED TO THIS HAZARDOUS AIR POLLUTANT. PCE IS CLASSIFIED AS A PROBABLE HUMAN CARCINOGEN(EPA GROUP B2). THE STATE OD CT SHOULD ASSIGN PCE TO ITS GROUP 2 CLASSIFICATION OF HAZARDOUS AIR POLLUTANTS. PCE HAS BEEN SHOWN TO AFFECT THE CENTRAL NERVOUS SYSTEM, LIVER, AND KIDNEY IN MICE, RATS, AND HUMANS. IT HAS RECENTLY BEEN SHOWN THAT INHALED PCE IS CARCINOGENIC IN MICE AND RATS; EPIDEMIOLOGICAL EVIDENCE FOR HUMAN CARCINOGENICITY IS INADEQUATE.BASED ON A SUBCHRONIC STUDY IN RATS, AN AMBIENT AIR QUALITY STANDARD OF 12PPB IS DEEMED TO PROTECTIVE AGAINST CHRONIC NON-CARCINOGENIC EFFECTS A SHORT TERM EXPOSURE GUIDELINE AT 200PPB (8 HR AVG) IS DEEMED TO PROTECT AGAINST CNS EFFECTS. ALSO, BASED ON ANIMAL DATA,A QUANTITATIVE ESTIMATE OF HUMAN CANCER HAZARD IS CALCULATED FOR INHALING AIR CONTAINING PCE. INHALATION OF AMBIENT AIR CONCENTRATIONS OF 0.16,1.6, AND 16.0 MICROGRAMS PCE PER CUBIC METER OF AIR IS ASSOCIATED WITH A LIFETIME EXCESS CANCER RISK OF 10^-6, 10^-5,AND 10^-4 RESPECTIVELY. IT IS THEREFORE RECOMMENDED THAT AN AMBIENT AIR QUALITY STANDARD BE BASED ON A UNIT RISK ESTIMATE,IE., THE UPPER-BOUND ESTIMATE OF THE INCREMENTAL CANCER RISK DUE TO LIFETIME EXPOSURE OF 1UG/M3 IS6.3X10^-6

RA RISK ASSESSMENT
STATE/LOC STATE OR LOCAL AGENCY

CT01-CTDEP-7
"A QUANTITATIVE RISK ASSESSMENT FOR DIMETHYLFORMAMIDE(DMF) EXPOSURES"
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
RAO, H., AND SHELNITZ, CT DEPT OF HEALTH SERVICES
03/01/87, 6. pages

THE HEALTH EFFECTS LITERATURE WAS SUMMARIZED, AND A RATIONALE WAS PRESENTED FOR ESTIMATING HEALTH EFFECTS ON HUMAN POPULATIONS FROM AMBIENT EXPOSURES.

RA RISK ASSESSMENT
STATE/LOC STATE OR LOCAL AGENCY

CT0185001
Proposed Program for Control of HAPs
CT DEPT. OF ENV. PROTECTION, AIR COMPLIANCE UNIT
J. Gove
08/21/85, 17p pages

The CT program will use "interim ceiling values" based on occupational occupational level for carcinogens, 1/100 for suspect carcinogens and 1/50 for noncarcinogens.
The program will apply to all sources--new at the time of permit review, existing at the time of inspection. Existing sources will be given up to 3 years to comply.
DEP will do monitoring (ambient and stack).

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

DE81026488
Workshop on Indoor Air Quality Research Needs
EPA, Washington, DC, OEET
Department of Energy
1980, 350p, EPA-600/7-81-118, PC A15/MF A01

Abstract: Workshop participants report on indoor air quality research needs including the monitoring of indoor air quality, report of the instrumentation subgroup of indoor air quality, health effects, and the report of the control technology session. Risk analysis studies addressing indoor environments were also summarized.

CL-IAP INDOOR AIR POLLUTANTS
EPA ENVIRONMENTAL PROTECTION AGENCY
IA INDOOR AIR

DE86011506/REB
Screening Polynuclear Aromatic Pollutants in Ambient and Indoor Air by Synchronous Luminescence
EPA, Research Triangle Park, NC, EMSL
Oak Ridge National Lab.
T. Vo-Dinh, G.H. Miller, and N.K. Wilson
1986, 9p CONF-860606-7, PC A02/MF A01

Abstract: This paper discusses the results of a field study designed to evaluate a screening procedure based on synchronous luminescence, for ranking air samples according to their total PNA content. The SL technique can be used not only for chemical detection, but also for monitoring biological markers, such as carcinogen-DNA adducts in human biological fluids due to exposure to PNA pollutants. (ERA citation 11:038791)

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING

DOE/CH/93015-3
Trace-Element Geochemistry of Coal Resource Development Related to Environmental Quality and Health
National Academy of Sciences
1980, 165p, PC A08/MF A01
ISBN 0-309-03048-X, $12.50

Abstract: This report assesses for decision makers and those involved in coal resource development the environmental and health impacts of trace-element effects arising from significant increases in the use of coal, unless unusual precautions are invoked. Increasing demands for energy and the pressing need for decreased independence of the United States on imported oil require greater use of coal to meet the nation's energy needs during the next decade. If coal production and consumption are increased at a greatly accelerated rate, concern arises over the release, mobilization, transportation, distribution, and assimilation of certain trace elements, with possible adverse effects on the environment and human health. It is, therefore, important to understand their geochemical pathways from coal and rocks via air, water, and soil to plants, animals, and ultimately humans, and their relation to health and disease. This report describes the amounts and distribution of trace elements related to the coal source; the various methods or coal extraction, preparation, transportation, and use; and the disposal or recycling of the remaining residues or wastes. The known or projected health effects are discussed at the end of each section.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
11	ANTHRACITE MINING
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
46	PIPE LINES, EXCEPT NATURAL GAS
461	PIPE LINES, EXCEPT NATURAL GAS
4619	PIPE LINES, NEC
50	WHOLESALE TRADE-DURABLE GOODS
505	METALS AND MINERALS, EXCEPT PETROLEUM
5052	COAL AND OTHER MINERALS AND ORES

EA/MB
Unpublished Exposure Assessments and Material Balances
EPA, Washington, D.C., OHEA
Dates vary, Length vary, Available on loan

Abstract: A set of microfiche containing primarily unpublished exposure assessments and material balances is available on loan from EPA. Some of these assessments discuss multi-media exposure and others discuss exposure via a single medium. One copy of the set may be borrowed for a one month period from the Office of Health and Environmental Assessment (contact Richard Walentowicz, U.S. EPA, Office of Health and Environmental Assessment (RD-689), 401 M Street, S.W., Washington, D.C. 20460). The set includes information for the substances listed below as key words.

CL-ADIP	ADIPATES
CL-CFC	CHLOROFLUOROCARBONS
CL-COE	COKE OVEN EMISSIONS
CL-CUTFLU	CUTTING FLUIDS
CL-HALOME	HALOMETHANES
CL-NITROSO	NITROSO COMPOUNDS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-PHENOL	PHENOLS
CL-PHOSPHA	PHOSPHATES
CL-PHTH	PHTHALATES
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
100-00-5	CHLORONITROBENZENE,4-
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
100-44-7	BENZYL CHLORIDE
10024-97-2	NITROUS OXIDE
101-14-4	CURENE
101-77-9	METHYLENEDIANILINE,4,4'-
1024-57-3	HEPTACHLOR EPOXIDE
103-11-7	ETHYLHEXYLACRYLATE,2-
103-23-1	ETHYLHEXYLADRPATS,2-
106-42-3	XYLENE,P-
106-44-5	CRESOL,P-
106-46-7	DICHLOROBENZENE,1,4-
106-48-9	CHLOROPHENOL,P-
106-89-8	EPICHLOROHYDRIN
106-93-4	ETHYLENE DIBROMIDE
106-99-0	BUTADIENE,1,3-
107-02-8	ACROLEIN
107-05-1	CHLOROPROPENE,3-
107-06-2	ETHYLENE DICHLORIDE
107-13-1	ACRYLONITRILE
107-98-2	PROPYLENE GLYCOL MONOMETHYL ETHER
108-38-3	XYLENE,M-

EA/MB (continued)

108-39-4	CRESOL,M-
108-80-5	CYANURIC ACID
108-88-3	TOLUENE
108-90-7	MONOCHLOROBENZENE
108-95-2	PHENOL
109-86-4	METHOXYETHANOL,2-
110-49-6	ETHYLENE GLYCOL METHYL ETHER ACETATE
110-80-5	ETHOXYETHANOL,2-
110-91-8	MORPHOLINE
111-15-9	ETHOXYETHYLACETATE,2-
111-76-2	ETHYLENE GLYCOL MONOBUTYL ETHER
111-77-3	ETHANOL, 2-(2-METHOXYETHOXY)-
111-90-0	DIETHYLENE GLYCOL MONOETHYL ETHER
1116-54-7	N-NITROSODIETHANOLAMINE
112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-
115-29-7	ENDOSULFAN
117-81-7	ETHYLHEXYLPHTHALATE,BIS,2-
117-84-0	DI-N-OCTYL PHTHALATE
118-74-1	HEXACHLOROBENZENE
120-82-1	TRICHLOROBENZENE,1,2,4-
120-83-2	DICHLOROPHENOL,2,4-
122-99-6	ETHYLENE GLYCOL MONOPHENYL ETHER
124-40-3	DIMETHYLAMINE
126-99-8	CHLOROBUTADIENE,2-,1,3-
127-18-4	TETRACHLOROETHYLENE
129-00-0	PYRENE
1318-00-9	VERMICULITE
1319-77-3	CRESOL (ALL ISOMERS)
1332-21-4	ASBESTOS
1336-36-3	POLYCHLORINATED BIPHENYLS
139-13-9	NITRILOTRIACETIC ACID
140-88-5	ETHYL ACRYLATE (INHIBITED)
141-32-2	BUTYLACRYLATE,N-
143-33-9	CYANIDES
143-50-0	KEPONE
149-57-5	ETHYLHEXANOICACID,2-
156-59-2	DICHLOROETHYLENE,1,2-,CIS-
1582-09-8	TRIFLURALIN
16065-83-1	CHROMIUM ION
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
18540-29-9	CHROMIUM (VI) COMPOUNDS
2385-85-5	MIREX
2432-99-7	AMINOUNDECANOIC ACID,11-
25321-22-6	BENZENE, DICHLORO
2832-40-8	DISPERSE YELLOW 3
3883-43-0	2,3-DICHLORO-1,4-DOXANE
495-54-5	2,4-DIAMINOAZOBENZENE
50-00-0	FORMALDEHYDE
50-29-3	DDT
50-32-8	BENZO(A)PYRENE

EA/MB (continued)

51-79-6	URETHANE
5160-02-1	D&C RED 9
532-82-1	BASIC ORANGE002,C.I.
540-59-0	DICHLOROETHYLENE,1,2-,CIS-TRANS-
542-88-1	CHLOROMETHYLETHER,BIS
56-23-5	CARBON TETRACHLORIDE
563-41-7	SEMICARBAZIDE HYDROCHLORIDE
57-12-5	CYANIDE
57-56-7	SEMICARBAZIDE
57-74-9	CHLORDANE
58-89-9	GAMMA-HEXACHLORO-CYCLOHEXANE
58-90-2	TETRACHLOROPHENOL,2,3,4,6-
593-60-2	VINYL BROMIDE
608-93-5	PENTACHLOROBENZENE
630-08-0	CARBON MONOXIDE
634-90-2	TETRACHLOROBENZENE,1,2,3,5-
63449-39-8	CHLOROWAX 500C
636-21-5	TOLUIDINEHYDROCHLORIDE,O-
67-64-1	ACETONE
67-66-3	CHLOROFORM
67-72-1	HEXACHLOROETHANE
71-23-8	PROPYL ALCOHOL
71-43-2	BENZENE
71-55-6	TRICHLOROETHANE,1,1,1-
72-43-5	METHOXYCHLOR
74-87-3	METHYL CHLORIDE
7439-92-1	LEAD POWDER
7439-96-5	MANGANESE
7439-97-6	MERCURY
7440-02-0	NICKEL POWDER
7440-22-4	SILVER
7440-28-0	THALLIUM, SOLUBLE COMPOUNDS, AS TL
7440-36-0	ANTIMONY
7440-38-2	ARSENIC AND COMPOUNDS AS AS
7440-39-3	BARIUM
7440-41-7	BERYLLIUM
7440-43-9	CADMIUM
7440-47-3	CHROMIUM
7440-50-8	COPPER
7440-66-6	ZINC
75-01-4	VINYL CHLORIDE
75-07-0	ACETALDEHYDE
75-09-2	METHYLENE CHLORIDE
75-20-8	ENDRIN
75-21-8	ETHYLENE OXIDE
75-34-3	DICHLOROETHANE,1,1-
75-35-4	DICHLOROETHYLENE,1,1-
75-44-5	PHOSGENE
75-56-9	PROPYLENE OXIDE
75-69-4	FLUOROTRICHLOROMETHANE

EA/MB (continued)

75-71-8	DICHLORODIFLUOROMETHANE
756-79-6	DIMETHYL METHYLPHOSPHONATE
76-13-1	TRICHLOROTRIFLUOROMETHANE,1,1,2-
76-44-8	HEPTACHLOR
7664-93-9	SULFURIC ACID
77-47-4	HEXACHLOROCYCLOPENTADIENE
7782-49-2	SELENIUM COMPOUNDS, AS SE
78-83-1	ISOBUTYL ALCOHOL
78-87-5	DICHLOROPROPANE,1,2-
78-93-3	BUTANONE,2-
79-00-5	TRICHLOROETHANE,1,1,2-
79-01-6	TRICHLOROETHYLENE
79-34-5	TETRACHLOROETHANE,1,1,2,2-
79-46-9	NITROPROPANE,2-
8001-35-2	TOXAPHENE
8007-45-2	COAL TAR PITCH VOLATILES
84-66-2	DIETHYL PHTHALATE
84-74-2	DI-N-BUTYL PHTHALATE
85-01-8	PHENANTHRENE
85-44-9	PHTHALIC ANHYDRIDE
85-68-7	BUTYL BENZYL PHTHALATE
87-68-3	HEXACHLORO-1,3-BUTADIENE
87-86-5	PENTACHLOROPHENOL
88-06-2	TRICHLOROPHENOL,2,4,6-
88-73-3	CHLORONITROBENZENE,2-
9002-86-2	POLYVINYL CHLORIDE LATEX
9010-98-4	1,3-BUTADIENE, 2-CHLORO-, HOMOPOLYMER
91-20-3	NAPHTHALENE
93-72-1	SILVEX
93-76-5	TRICHLOROPHENOXYACETICACID,2,4,5-
95-47-6	XYLENE,O-
95-48-7	CRESOL,O-
95-50-1	DICHLOROBENZENE,1,2-
95-53-4	TOLUIDINE,O-
95-57-8	CHLOROPHENOL,O-
95-80-7	DIAMINOTOLUENE,2,4-
95-87-7	METHYL-1,3-BENZENEDIAMINE
95-94-3	TETRACHLOROBENZENE,1,2,4,5-
95-95-4	TRICHLOROPHENOL,2,4,5-
96-12-8	DIBROMOCHLOROPROPANE,1,2-,3-
98-95-3	NITROBENZENE

EPACASR TAPES
Chemical Activities Status Report Tapes
EPA, Washington, DC, OPTS
E.T. Merrick
Feb 85

Abstract: Available from: Walter Finch, Director of Office of Product Management, National Technical Information Service (NTIS), Springfield, Virginia, 22161, (703) 487-4805. Funding for updating the EPA Chemical Activities Status Report (EPACASR) ended in 1984. An updated edition of the data base described previously is available on tape which is current through August 1984. No hard copy of the data is available. Copies of the tape can be obtained through NTIS by requesting the "EPACASR Tapes" dated February 1985. Two companies with copies of the tapes provide on-line data base access services. Users may buy a subscription which allows them to access the data base on their own terminals through a modem, or they may hire one of the companies to do on-line searches and data retrieval at a per hour rate. Contact: Laurie Donaldson, Chemical Information Services (CIS, Inc.), Baltimore, Maryland, 21212, (800) 247-8737 or (301) 821-5980. Or contact Mark Posin, Information Consultants, Inc. (ICI), Washington, D.C., (202) 822-5200. See also entries PB84-213958 and PB84-213966.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
TT	TOXICITY TESTING

FL0185001
The Florida Toxic Air Contaminants Program Abstract--Draft
FL DEPT. OF ENV. REG., BUR. OF AIR QUALITY MGMT.
Ligia Mora and John Glunn
06/01/85, 18p pages

Draft document presents the proposed guidelines for the control of air two categories of high and low toxicity, and the use of TLVs or health effects data with safety factors to determine acceptable ambient concentrations. For sources emitting compounds with clear carcino genic potential, risk assessment and management would be conducted on a case-by-case basis to evaluate the "insignificant risk level". Both new and existing sources would be covered by various control options related to their status and the category of pollutant(s) emitted.

PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC	STATE OR LOCAL AGENCY

GA0185001
Guideline for Ambient Impact Assessment of Toxic Air Pollutant Emissions
Georgia Air Protection Branch
GA DEPT. OF NATURAL RESOURCES, AIR PROTECTION BRANCH
GA Air Protection Branch
07/01/84, 21p pages

Guideline in use for assessment of non-criteria pollutant impact and dispersion modeling from simple to complex and suggests priority for use of toxicity data. Recommendations for multiple stacks and multiple pollutants also included.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC	STATE OR LOCAL AGENCY

GPO 017-033-00234-7
Criteria for a Recommended Standard: Occupational Exposure to Refined Petroleum Solvents
National Institute of Occupational Safety and Health
1977, 255 p., $7.00
NIOSH PUB No: 77-192, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

CL-SOLVENT	SOLVENTS
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

GPO 017-033-00284-3
Criteria for a Recommended Standard: Occupational Exposure to Cresol
National Institute of Occupational Safety and Health
1978, 127 p., $6.00
NIOSH PUB No: 78-133, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1319-77-3	CRESOL (ALL ISOMERS)

GPO 017-033-00418-8
Pocket Guide to Chemical Hazards
National Institute of Occupational Safety and Health
1985, 254p, $5.00
NIOSH Pub. No. 85-114, Avail NIOSH

Abstract: A source of summary information for employees, employers, occupational health professionals, and others who need data on chemical hazards is provided. The pocket guide includes key information and data in an abbreviated tabular format for 397 workplace chemical hazards for which there are specific Federal regulations. Each listing includes chemical name, synonyms, permissible exposure limit, immediately dangerous to life or health concentration, physical description, chemical and physical properties, incompatibilities, measurement method, personal protection and sanitation methods, respirator selection, route of entry, symptoms, first aid, and target organs.

NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

GPO 017-033-00421-8
Registry of Toxic Effects of Chemical Substances, 1983-84 Cumulative Supplement to the 1981-82 Edition, 2 Volumes
National Institute of Occupational Safety and Health
1985, 2112p, $27.00
NIOSH Pub. No. 86-103, Unavail NIOSH

Abstract: This thirteenth edition is a supplement to the 1981-82 edition and contains all new and altered data entered into the file during 1983-84. It also includes all substances for which regulatory or consensus group information is cited. This supplement contains prime name chemical substances with their associated toxicity data, and it should be used together with the 1981-82 edition if the complete file is needed.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
RDG	REG DEVELOPMNT GUIDE

GPO 017-042-00193-5
Survey of Compounds Which Have Been Tested for Carcinogenic Activity, 1983-1984, Section 1-2
National Cancer Institute
1986, 2074p, NIH 86-2883, $86.00

Abstract: Presents carcinogenic data extracted from medical literature published in 1983-1984. No attempt has been made to critically review or assess the findings. Volumes are organized according to sections, sold as a set.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

GPO 055-000-00251-7
Compilation of Air Pollutant Emission Factors. V. 1: Stationary Point and Area Sources
EPA, Research Triangle Park, NC, OAQPS
1985, 888p, AP-42, $20.00

Abstract: This fourth edition is issued in looseleaf form. It presents recent data on emissions of atmospheric pollutants for which sufficient information exists to establish realistic emission factors. This edition consists chiefly of statistical tables and charts. Volume I contains emission factor data for stationary point and area sources. Volume II, which was formerly Chapter 3.0 in the third edition, officially revises all previous emission factor documents (AP-42) for highway mobile sources. Future supplements will be available from the U.S. Government Printing Office.

EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

GPO 055-000-00252-5
Compilation of Air Pollutant Emission Factors. V. 2: Mobile Sources
EPA, Ann Arbor, MI, OMS
1985, 587p, AP-42, $19.00

Abstract: This fourth edition is issued in looseleaf form. It presents recent data on emissions of atmospheric pollutants for which sufficient information exists to establish realistic emission factors. This edition consists chiefly of statistical tables and charts. Volume I contains emission factor data for stationary point and area sources. Volume II, which was formerly Chapter 3.0 in the third edition, officially revises all previous emission factor documents (AP-42) for highway mobile sources. Future supplements will be available from the U.S. Government Printing Office.

EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

GPO 055-000-00258-4
Citizen's Guide to Radon: What It Is and What To Do About It
EPA
1986, 13p, OPA-86-004, $1.00

Abstract: Presents information to help the public understand the radon problem in order to determine if action is needed to reduce radon levels in their homes. Also contains a listing of EPA regional offices with addresses and telephone numbers.

CT CONTROL TECHNOLOGY DOCUMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
10043-92-2 RADON

GPO 055-000-00259-2
Radon Reduction Methods: A Homeowner's Guide
EPA
1986, 24p, OPA-86-005, $1.00

Abstract: Describes various methods which may be used to reduce the levels of radon in the home. The methods are intended to prevent the entry of radon or to replace the contaminated air.

CT CONTROL TECHNOLOGY DOCUMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
10043-92-2 RADON

GPO 717-024-00000-1
Registry of Toxic Effects of Chemical Substances (Microfiche)
National Institute of Occupational Safety and Health
$34.00

Abstract: Quarterly microfiche periodical issued in January, April, July, and October. RTECS provides basic information on the known toxic and biological effects of chemical substances. It is intended for use by employers, employees, physicians, industrial hygienists, toxicologists, researchers and others concerned with the proper and safe handling of chemicals. Each fiche set contains the complete RTECS data file.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
RDG REG DEVELOPMNT GUIDE

HRP-0028011/5
Asbestos - An Information Resource
National Cancer Institute
1978, 187 p., PC A09/MF A01

Abstract: This book reviews the uses of asbestos, the biological effects of ingesting asbestos fibers in the air and in water and food, and the studies linking asbestos with disease, both as a carcinogen and as a noncarcinogen. It also provides a description of the types of occupations that might experience high levels of airborne fibers, for example, automotive mechanics working on brakes and clutches, insulation workers, roofers, and drywall mechanics, and occupations in which asbestos is used in clothing (as for firefighters). The book also reviews the exposure to asbestos from nonoccupational sources: fibers in the air, food, and water. In addition, strategies and programs for control of the asbestos hazard are considered: attention is given to physical control, medical management, and education. The appendixes deal with such topics as the sources of asbestos, Federal regulations on exposure, smoking, and educational materials. Seven tables provide data on the U.S. consumption of asbestos, the uses of asbestos, death from respiratory cancer, and exposure risks.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
08	FORESTRY
085	FORESTRY SERVICES
0851	FORESTRY SERVICES
1332-21-4	ASBESTOS
17	SPECIAL TRADE CONTRACTORS
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2952	ASPHALT FELTS AND COATINGS
30	RUBBER AND MISC. PLASTICS PRODUCTS
304	RUBBER AND PLASTICS HOSE AND BELTING
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
52	BUILDING MATERIALS & GARDEN SUPPLIES
521	LUMBER AND OTHER BUILDING MATERIALS
5211	LUMBER AND OTHER BUILDING MATERIALS

HRP-0028012/3
Vinyl Chloride - An Information Resource
National Cancer Institute
1978, 122 p., PC A06/MF A01

Abstract: A discussion of the link between exposure to vinyl chloride and the occurrence of toxic, nonmalignant illnesses involving skin, bones, liver, lungs, and blood is provided. The regulatory history of vinyl chloride is outlined. It is pointed out that the potential for human contact with vinyl chloride is great. About 2.5 billion kilograms of vinyl chloride are produced each year in the United States. The vinyl chloride is produced at 15 plants employing 900 workers. Vinyl chloride is also polymerized at 39 plants, employing more than 5,500 workers. The Environmental Protection Agency has estimated that approximately five million people live near enough to vinyl chloride facilities to be within range of detectable airborne concentrations of the gas. The production, uses, and dispersion of vinyl chloride are discussed and evidence of its toxic and carcinogenic effects are summarized. Strategies for the control of vinyl chloride are suggested. The appendixes contain a list of vinyl-chloride-related compounds, an approach to evaluation and control of vinyl chloride exposure, and sources for additional information.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

ISBN 0-309-02314-9
Medical and Biologic Effects of Environmental Pollutants: Nickel
National Academy of Sciences
1975, 277 p., $16.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-02-0	NICKEL POWDER

ISBN 0-309-02401-3
Decision Making for Regulating Chemicals in the Environment
National Academy of Sciences
1975, 232 p., $14.25

Abstract Not Available

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT

ISBN 0-309-02441-2
Medical and Biologic Effects of Environmental Pollutants: Vapor-Phase Organic Pollutants
National Academy of Sciences
1976, 411 p., $14.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

CL-ORGANIC	ORGANIC COMPOUNDS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-02503-6
Medical and Biologic Effects of Environmental Pollutants: Selenium
National Academy of Sciences
1976, 203 p., $11.75

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7782-49-2	SELENIUM COMPOUNDS, AS SE

ISBN 0-309-02519-2
Medical and Biologic Effects of Environmental Pollutants: Chlorine and Hydrogen Chloride
National Academy of Sciences
1976, 282 p., $11.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7647-01-0	HYDROGEN CHLORIDE
7782-50-5	CHLORINE

ISBN 0-309-02531-1
Medical and Biologic Effects of Environmental Pollutants: Ozone and Other Photochemical Oxidants
National Academy of Sciences
1977, 719 p., $19.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
10028-15-6	OZONE

ISBN 0-309-02536-2
Medical and Biologic Effects of Environmental Pollutants: Copper
National Academy of Sciences
1977, 115 p., $8.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-50-8	COPPER

ISBN 0-309-02604-0
Medical and Biologic Effects of Environmental Pollutants: Arsenic
National Academy of Sciences
1977, 322 p., $14.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biologic effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-38-2	ARSENIC AND COMPOUNDS AS AS

ISBN 0-309-02619-9
Drinking Water and Health. Volume 1.
National Academy of Sciences
1977, 905 p., $28.50

Abstract: The findings and recommendations of a study which was conducted to explore the potentially harmful effects that impurities in water may have on the health of those drinking it were explored. The study, whose purpose, scope, and duration were outlined in the Safe Drinking Water Act of 1974, was carried out by the Committee on Safe Drinking Water of the National Research Council. The general approach, principles, and criteria adopted in the study are outlined following a brief historical note on the search for pure water. The procedure involved a review of the scientific literature. The discussion which follows deals with safety and risk assessment. Attention is given to the scientific methods and criteria used for evaluating the long-term effects on and hazards to humans. The principal microbiological contaminants of drinking water in the United States - bacteria, viruses, and pathogenic protozoa - are then discussed. Subsequent material focuses on solid particles in suspension, inorganic solutes, organic solutes, and radioactivity in drinking water. Tables, figures, and appendixes containing an executive summary and material on legislation accompany the text.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

ISBN 0-309-02631-8
Medical and Biologic Effects of Environmental Pollutants: Carbon Monoxide
National Academy of Sciences
1977, 239 p., $11.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
630-08-0	CARBON MONOXIDE

ISBN 0-309-02885-X
Polychlorinated Biphenyls
National Academy of Sciences
1979, 182 p., $8.75

Abstract Not Available

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

ISBN 0-309-03130-3
Health Effects of Exposure to Diesel Exhausts
National Academy of Sciences
1981, 169 p., $10.25

Abstract Not Available

CL-DIESEL	DIESEL FUEL EMISSIONS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-03180-X

ISBN 0-309-03188-5
Indoor Pollutants
National Academy of Sciences
1981, 560p, $39.95

One of the first studies of its kind, this report focuses on contaminants found inside homes, schools, public buildings, and similar spaces to which the public has access. It reviews the sources of indoor pollutants, their effects on human health and comfort, and the technology available for their control or abatement.

CL-IAP	INDOOR AIR POLLUTANTS
IA	INDOOR AIR
NAS	NATIONAL ACADEMY OF SCIENCES
82	EDUCATIONAL SERVICES
829	SCHOOLS & EDUCATIONAL SERVICES, NEC
8299	SCHOOLS & EDUCATIONAL SERVICES, NEC
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

ISBN 0-309-03230-X
The Health Effects of Nitrates, Nitrites, and n-Nitroso Compounds
National Academy of Sciences
1981, 544 p., $14.95

Abstract Not Available

CL-NITRATE	NITRATES
CL-NITRITE	NITRITES
CL-NITROSO	NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-03349-7
Risk Assessment in the Federal Government: Managing the Process
National Academy of Sciences
1983, 191 p., $11.75

Abstract: The regulation of potentially hazardous substances has become one of the most controversial issues of the last decade. This new volume evaluates past efforts to develop and use risk assessment guidelines, reviews the experience of regulatory agencies with different administrative arrangements for risk assessment, and evaluates various proposals to modify procedures. The report's conclusions and recommendations can be applied across the entire field of environmental health.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT

ISBN 0-309-03381-0
Drinking Water and Health. Volume 5.
National Academy of Sciences
1983, 157 p., $15.95

Abstract: This latest volume in the Drinking Water and Health series examines for the first time the health effects of 8 compounds found in drinking water and updates earlier evaluations of 13 other contaminants. Reviewed are important health effects of arsenic and asbestos intake through the water supply.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

ISBN 0-309-03430-2
Protection Against Trichothecene Mycotoxins
National Academy of Sciences
1983, 227 p., $17.95

Abstract: In response to growing concern about the use of trichothecenes in warfare, this report studies the effects of "yellow rain" on civilians and military personnel who might be exposed to high levels of these substances. The repot discusses the natural occurrences of mycotoxins, methods of detection and detoxification, long-term environmental effects, effects on humans and animals, and strategies for prevention and treatment.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 0-309-03527-9
Disposal of Chemical Munitions and Agents
National Academy of Sciences
1984, 216p, $16.50

Abstract: This study recommends the most effective, most economical, and safest means for disposing of the Department of the Army's aging and obsolete stockpiles of chemical agents and munitions. One section evaluates the state of the munitions and the eight sites where they are stored, including analyses of risk, security, and medical and legal aspects. A second section reviews current and future disposal technologies; transportation and human factors are also considered.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY

ISBN 0-309-03687-9
Drinking Water and Health, Volume 6
National Academy of Sciences
1986, 457p, $28.50

Abstract: The most recent volume in the Drinking Water and Health series contains the results of a two-part study on the toxicity of drinking water contaminants. The first part examines current practices in risk assessment, identifies new noncancerous toxic responses to chemicals found in drinking water, and discusses the use of pharmacokinetic data to estimate the delivered dose and response. The second part of the book provides risk assessments for 14 specific compounds, nine presented here for the first time.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT

ISBN 0-309-03730-1
Environmental Tobacco Smoke: Measuring Exposures and Assessing Health Effects
National Academy of Sciences
1986, 352p, $19.95

Abstract: This comprehensive book examines the recent research investigating the characteristics and composition of different types of environmental tobacco smoke (ETS) and discusses possible health effects of ETS. The volume presents an overview of methods used to determine exposures to environmental smoke and reviews both chronic and acute health effects. Many recommendations are made for areas of further research, including the differences between smokers and nonsmokers in absorbing, metabolizing, and excreting the components of ETS, and the possible effects of ETS exposure during childhood and fetal life.

CL-ETS	ENVIRONMENTAL TOBACCO SMOKE
EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

ISBN 92-2-154090-7
WHO Environmental Health Criteria, No. 30, Principles for Evaluating Health Risks to Progeny Associated with Exposure to Chemicals during Pregnancy
World Health Organization
1984, 177p, $8.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-120546-6
Technical Report Series, No. 546, Assessment of the Carcinogenicity and Mutagenicity of Chemical, Report of a WHO Scientific Group
World Health Organization
1974, 19 p., $2.00

Abstract Not Available

CL-CARCIN CARCINOGENS
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120647-0
Technical Report Series, No. 647, Recommended Health-based Limits in Occupational Exposure to Heavy Metal
World Health Organization
1980, 116 p., $4.00

Abstract: For each chemical or substance covered, the document summarizes properties, uses, and health hazards. Included are: metabolism of the compound, assessment of exposure, health effects, and relationships between exposure and effects. Conclusions regarding health-based occupational exposure limits, recommendations, and research possibilities are also given.

CL-METAL METALLIC COMPOUNDS
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120662-4
Technical Report Series, No. 662, Health Effects of Combined Exposures in the Work Environment Report of a WHO Expert Committee (Geneva, 1980)
World Health Organization
1981, 76 p., $2.00

Abstract Not Available

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120664-0
Technical Report Series, No. 664, Recommended Health-based Limits in Occupational Exposure to Selected Organic Solvents
World Health Organization
1981, 84 p., $3.00

Abstract: For each chemical or substance covered, the document summarizes properties, uses, and health hazards. Included are: metabolism of the compound, assessment of exposure, health effects, and relationships between exposure and effects. Conclusions regarding health-based occupational exposure limits, recommendations, and research possibilities are also given.

CL-SOLVENT SOLVENTS
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120677-2
Technical Report Series, No. 677, Recommended Health-based Limits in Occupational Exposure to Pesticides
World Health Organization
1982, 110 p., $4.00

Abstract: For each chemical or substance covered, the document summarizes properties, uses, and health hazards. Included are: metabolism of the compound, assessment of exposure, health effects, and relationships between exposure and effects. Conclusions regarding health-based occupational exposure limits, recommendations, and research possibilities are also given.

CL-PEST PESTICIDES
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-120720-5
Technical Report Series, No. 720, Safe Use of Pesticides
World Health Organization
1985, 60p, $3.00

Abstract: Since the last WHO report on this topic, published in 1979, increased knowledge and altered patterns of vector-borne disease have resulted in fundamental changes in the approach to vector control recommended by WHO. This report covers these changes, incorporating new knowledge on the toxicology of pesticides, issues raised by the development of new mutants and by genetic engineering, increased knowledge of the effects of human exposure to specific compounds, and new strategies for the protection of humans and the prevention and treatment of poisoning. In establishing advice for the safe use of pesticides, the report gives special attention to the need for risk-benefit analysis. The report also covers recommendations for protection of people using pesticides as well as for the safe disposal of used containers.

CL-PEST	PESTICIDES
EA	EXPOSURE ASSESSMENT
TT	TOXICITY TESTING
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-120734-5
Technical Report Series, No. 734, Recommended Health-Based Limits in Occupational Exposure to Selected Mineral Dusts (silica, coal)
World Health Organization
1986, 82p, $6.00

Abstract: Concerned with the effects of inhaled mineral dusts containing relatively high levels of silica and of mixtures of dusts produced during the extraction and processing of coal. Utilizing data on exposure-effects and exposure-response relationships, the report sets forth recommendations based on an evaluation of the incidence of silicosis or coal-workers pneumoconiosis following exposure to silica and coal. Recommendations take account only of health considerations and do not include the problem of implementing operational limits. The assessment of numerous monographs, review papers, and original research reports, which support the recommendations, is also used to identify gaps in existing knowledge and requirements for further research. Annexed to the report are a definition of pneumoconiosis adopted in 1971, a summary of the international classification of radiographs of pneumoconiosis, and a table listing occupational exposure limits in selected countries.

CL-MINDUST	MINERAL DUSTS
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
7631-86-9	SILICA

ISBN 92-4-154061-3
WHO Environmental Health Criteria, No. 1, Mercury
World Health Organization
1976, 131 p., $7.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
7439-97-6	MERCURY

ISBN 92-4-154062-1
WHO Environmental Health Criteria, No. 2, Polychlorinated Biphenyls and Terphenyls
World Health Organization
1976, 85 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
11097-69-1	AROCLOR 1254
118-74-1	HEXACHLOROBENZENE
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)
61788-33-8	TERPHENYL, POLYCHLORINATED

ISBN 92-4-154065-6
WHO Environmental Health Criteria, No. 5, Nitrates, Nitrites, and N-Nitroso Compounds
World Health Organization
1978, 107 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

CL-NITRATE	NITRATES
CL-NITRITE	NITRITES
CL-NITROSO	NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-154066-4
WHO Environmental Health Criteria, No. 6, Principles and Methods for Evaluating the Toxicity of Chemicals. Part 1
World Health Organization
1978, 272 p., $14.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-154067-2
WHO Environmental Health Criteria, No. 7, Photochemical Oxidants
World Health Organization
1979, 110 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
10028-15-6	OZONE

ISBN 92-4-154069-9
WHO Environmental Health Criteria, No. 9, DDT and its Derivatives
World Health Organization
1979, 194 p., $8.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
50-29-3 DDT

ISBN 92-4-154070-2
WHO Environmental Health Criteria, No. 10, Carbon Disulfide
World Health Organization
1979, 100 p., $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
75-15-0 CARBON DISULFIDE

ISBN 92-4-154075-3
WHO Environmental Health Criteria, No. 15, Tin and Organotin Compounds. A preliminary review
World Health Organization
1980, 109 p., $3.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7440-31-5 TIN, AS SN

ISBN 92-4-154077-X
WHO Environmental Health Criteria, No. 17, Manganese
World Health Organization
1981, 110 p., $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7439-96-5 MANGANESE

ISBN 92-4-154078-8
WHO Environmental Health Criteria, No. 18, Arsenic
World Health Organization
1981, 173 p., $10.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7440-38-2 ARSENIC AND COMPOUNDS AS AS

ISBN 92-4-154079-6
WHO Environmental Health Criteria, No. 19, Hydrogen Sulfide
World Health Organization
1981, 48 p., $3.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7783-06-4 HYDROGEN SULFIDE

ISBN 92-4-154080-X
WHO Environmental Health Criteria, No. 20, Selected Petroleum Products
World Health Organization
1982, 139 p., $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154084-2
WHO Environmental Health Criteria, No. 24, Titanium
World Health Organization
1982, 68 p., $5.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
7440-32-6 TITANIUM

ISBN 92-4-154085-0
WHO Environmental Health Criteria, No. 25, Selected Radionuclides
World Health Organization
1983, 237 p., $9.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-154086-9
WHO Environmental Health Criteria, No. 26, Styrene
World Health Organization
1983, 123p, $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
100-42-5	STYRENE

ISBN 92-4-154087-7
WHO Environmental Health Criteria, No. 27, Guidelines on Studies in Environmental Epidemiology
World Health Organization
1983, 351p, $13.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
RDG	REG DEVELOPMNT GUIDE
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-154088-5
WHO Environmental Health Criteria, No. 28, Acrylonitrile
World Health Organization
1983, 125p, $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
107-13-1	ACRYLONITRILE

ISBN 92-4-154089-3
WHO Environmental Health Criteria, No. 29, 2,4-Dichlorophenoxyacetic Acid (2,4-D)
World Health Organization
1984, 151p, $7.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
94-75-7	DICHLOROPHENOXYACETICACID,2,4-

ISBN 92-4-154091-5
WHO Environmental Health Criteria, No. 31, Tetrachloroethylene
World Health Organization
1984, 48p, $3.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
127-18-4	TETRACHLOROETHYLENE

ISBN 92-4-154092-3
WHO Environmental Health Criteria, No. 32, Methylene Chloride
World Health Organization
1984, 55p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
75-09-2	METHYLENE CHLORIDE

ISBN 92-4-154093-1
WHO Environmental Health Criteria, No. 33, Epichlorohydrin
World Health Organization
1984, 51p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
106-89-8	EPICHLOROHYDRIN

ISBN 92-4-154094-X
WHO Environmental Health Criteria, No. 34, Chlordane
World Health Organization
1984, 82p, $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
12789-03-6	CHLORDANE TECHNICAL MIXTURE

ISBN 92-4-154096-6
WHO Environmental Health Criteria, No. 36, Fluorine and Fluorides
World Health Organization
1984, 136p, $6.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
16984-48-8	FLUORIDES
7782-41-4	FLUORINE

ISBN 92-4-154098-2
WHO Environmental Health Criteria, No. 38, Heptachlor
World Health Organization
1984, 81p, $5.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
76-44-8	HEPTACHLOR

ISBN 92-4-154099-0
WHO Environmental Health Criteria, No. 39, Paraquat and Diquat
World Health Organization
1984, 181p, $8.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
4685-14-7	DIMETHYL-4,4-BIPYRIDINIUM,1,1-
85-00-7	DIQUOT

ISBN 92-4-154180-6
WHO Environmental Health Criteria, No. 40, Endosulfan
World Health Organization
1984, 62p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
115-29-7	ENDOSULFAN

ISBN 92-4-154181-4
WHO Environmental Health Criteria, No. 41, Quintozene
World Health Organization
1984, 38p, $3.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
82-68-8	PENTACHLORONITROBENZENE

ISBN 92-4-154182-2
WHO Environmental Health Criteria, No. 42, Tecnazene
World Health Organization
1984, 23p, $3.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
117-18-0	TETRACHLORONITROBENZENE,2,3,5,6-

ISBN 92-4-154183-0
WHO Environmental Health Criteria, No. 43, Chlordecone
World Health Organization
1984, 57p, $4.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
143-50-0	KEPONE

ISBN 92-4-154184-9
WHO Environmental Health Criteria, No. 44, Mirex
World Health Organization
1984, 70p, $4.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
2385-85-5	MIREX

ISBN 92-4-154185-7
WHO Environmental Health Criteria, No. 45, Camphechlor
World Health Organization
1984, 66p, $4.50

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
8001-35-2	TOXAPHENE

ISBN 92-4-154186-5
WHO Environmental Health Criteria, No. 46, Guidelines for the Study of Genetic Effects in Human Populations
World Health Organization
1985, 126p, $6.00

Abstract: These publications examine the relationship between exposure to environmental pollutants and man's health. For each pollutant examined, the available information in the following areas is summarized: chemical properties and analytical methods, sources of environmental pollution, environmental transport and fate, environmental concentration and exposures, metabolism, and effects on animals and man. An evaluation of human health risks is presented for some pollutants. Summaries and recommendations for further research are also given.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-154187-3
WHO Environmental Health Criteria, No. 47, Summary Report on the Evaluation of Short-Term Tests for Carcinogens (Collaborative Study on In Vitro Tests)
World Health Organization
1985, 77p, $4.50

Abstract: Summarizes the work of a major collaborative study concerned with the reliability of short-term tests for the in vitro assessment of mutagenicity and carcinogenicity. The study, which involved the participation of 60 key investigators, was organized in response to concern over the inability of the widely-used Salmonella, or "Ames", assay to detect carcinogenic potential in certain specific cases. Virtually all currently available in vitro eukaryotic assay systems were challenged with a small group of carefully selected chemicals known to present problems in short-term testing. Details on the background of the study, its objectives, design, findings, and recommendations are recorded in this document, which concludes that the adoption of an assay for chromosomal aberrations as a complementary test to the Ames test might provide an efficient primary screen for possible carcinogens.

HA	HEALTH ASSESSMENT
TT	TOXICITY TESTING
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-154188-1
WHO Environmental Health Criteria, No. 48, Dimethyl Sulfate
World Health Organization
1985, 55p, $4.00

Abstract: Dimethyl sulfate (DMS), an oily liquid used extensively as an alkylating agent, is highly toxic for man, with particularly acute effects on the respiratory tract. This document evaluates the risks to human health and the environment from exposure to DMS. Prepared by a 14-member task group of international authorities, the booklet provides an expert synthesis of current knowledge recorded in close to 150 published reports. Coverage ranges from techniques for determining environmental concentrations, through possible emission sources, up to recommended occupational exposure levels for various countries. Clinical and epidemiological evidence of health risks in man is presented together with thorough information on acute effects, chronic toxicity, carcinogenicity, and teratogenicity as determined in numerous animal studies and test systems.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
77-78-1 DIMETHYL SULFATE

ISBN 92-4-154190-3
WHO Environmental Health Criteria, No. 50, Trichloroethylene
World Health Organization
1985, 133p, $6.50

Abstract: Trichloroethylene is a liquid with extensive applications in metal degreasing, textile cleaning, solvent extraction processes, and as a carrier solvent. Exposure in the workplace, which may occur via inhalation of the vapour or skin contamination with the liquid, is known to carry risks of central nervous system disturbances and liver and kidney damage. This report provides a thorough assessment of the risks to human health and the environment posed by the industrial use of trichloroethylene. Coverage ranges from a survey of analytical methods for assessing levels in human tissues and fluids, through a list of signs and symptoms of over-exposure in man and the treatment of poisoning, to a statement of precautions to follow in handling, storage, and disposal. Also featured are an analysis of animal and cell system studies on the effects of short-term and long-term exposure and a summary of epidemiological studies relevant to an assessment of carcinogenicity. Approximately 400 references are included.

HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION
79-01-6 TRICHLOROETHYLENE

ISBN 92-4-154191-1
WHO Environmental Health Criteria, No. 51, Guide to Short-term Tests for Detecting Mutagenic and Carcinogenic Chemicals
World Health Organization
1985, 208p, $8.00

Abstract: A fully referenced document offering guidance in the field of short-term testing for mutagens and genotoxic carcinogens. In view of the acknowledged limitations in the capacity of short-term tests to screen for mutagenicity and carcinogenicity, the report attempts to explain the types of test that are commonly employed and the meaning that the results of such tests may have in the assessment of possible human hazard. The most extensive section contains descriptions, in phylogenetic order, of the most commonly used and most widely accepted assays. Empahsis is placed on the specific minimal scientific and technical criteria regarded as critical factors in obtaining data of acceptable quality and reliability. The next section discusses additional criteria that relate to good laboratory practice in genetic toxicology and to the type and quality of laboratory facilities. The report concludes with guidelines for the selection, application, and interpretation of short-term tests.

HA HEALTH ASSESSMENT
TT TOXICITY TESTING
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154192-X
WHO Environmental Health Criteria, No. 52, Toluene
World Health Organization
1985, 146p, $7.00

Abstract: Toluene is the common name for methylbenzene a commercially important intermediate chemical produced throughout the world in enormous quantities. The general population is exposed to toluene mainly through inhalation of vapour in ambient air, cigarette smoking, and, to a minor extent, by ingestion of contaminated food or water. Toluene has its principal effects on the central nervous system. Apart from risks associated with occupational exposure, toluene poses special hazards to "glue-sniffers", who intentionally abuse solvent mixtures containing this chemical. This report assesses close to 500 animal and human studies concerned with the effects of short- and long-term exposure to toluene, including its abuse. Environmental effects are also considered. While concluding that exposure of the general population and environment does not at present constitute a significant hazard to health or environment, the report notes that long-term occupational exposure and solvent abuse may be associated with permanent pathological changes.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
108-88-3	TOLUENE

ISBN 92-4-154193-8
WHO Environmental Health Criteria, No. 53, Asbestos and Other Natural Mineral Fibres
World Health Organization
1986, 194p, $9.60

Abstract: The report of a task group commissioned to review available data on asbestos and other natural mineral fibres and to assess the health risks associated with exposure. The book concentrates on the detection of points of inconsistency or consensus in the literature that can be used to develop a more precise understanding of health hazards and the best ways to prevent them. In addition to risks associated with occupational exposure, the book evaluates risks in the population at large. The opening sections provide background information on the main environmental and man-made sources of asbestos and describe recently developed methods for determining levels of asbestos fibres in the air at workplaces. The book categorizes the main types of industrial use, illustrates the ways that asbestos can be incorporated into an end-product, and tabulates information on the most important asbestos-containing products and their approximate fibre contents. A section devoted to experimental work reviews the considerable body of toxicological data available from studies in animals and cell systems. The final section presents the essential conclusions about health risks to man that can be drawn on the basis of available data and accepted models for risk assessment. The book cites evidence that erionite is a hazardous carcinogen. 500 refs.

CL-MINFIB	MINERAL FIBERS
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
1332-21-4	ASBESTOS

ISBN 92-4-154195-4
WHO Environmental Health Criteria, No. 55, Ethylene Oxide
World Health Organization
1985, 79p, $4.50

Abstract: Ethylene oxide is a colourless, highly reactive, and flammable gas widely used as an intermediate in the production of various chemicals. Human exposure mainly occurs through inhalation in sterilization facilities and in production plants. Exposure may also occur through fumigated foods, pharmaceutical products, and sterilized medical equipment. This report uses a comprehensive search of original scientific literature on ethylene oxide to evaluate the associated risks for human, health, and the environment. On the basis of extensive data derived from animal investigations, test systems, and epidemiological findings suggesting an increase in the incidence of human cancer, the report concludes that ethylene oxide should be considered as a probable human carcinogen, and that its levels in the environment should be kept as low as feasible.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
75-21-8	ETHYLENE OXIDE

ISBN 92-4-154196-2
WHO Environmental Health Criteria, NO. 56, Propylene Oxide
World Health Organization
1985, 53p, $4.00

Abstract: Propylene oxide is a colourless, highly voltile, and flammable liquid primarily used as a chemical intermediate. Small amounts are used for the sterilization of medical equipment and for the fumigation of foodstuffs. The main route of human exposure is through inhalation at the work place. This report evaluates available scientific data on the risks posed by propylene oxide to human health and the environment. On the basis of this analysis, the report concludes that propylene oxide should be regarded, for practical purposes, as presenting a carcinogenic risk for man, and that levels in the environment should be kept as low as feasible.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
75-56-9	PROPYLENE OXIDE

ISBN 92-4-154258-6
WHO Environmental Health Criteria, No. 58, Selenium
World Health Organization
1986, 273p, $13.20

Abstract: A richly detailed analysis of the many research issues surrounding the role of selenium as both an essential and a toxic element. The book opens with an analysis of what is known about the distribution of this ubiquitous element in the environment, including the natural presence of selenium in the food chain. Human activities, such as agricultural practices and certain manufacturing and refining PROCESSES, THAT CAN INFLUENCE NATURAL DISTRIBUTION ARE ALSO DISCUSSED. The book provides especially extensive coverage of levels typically found in different foods and the factors that can account for unusually high or low concentrations. A section devoted to human exposure discusses the extent to which eating habits, food preferences, and special medical diets may determine individual risk of a deficient or excessive intake of selenium. Other sections cover the metabolism of selenium and summarize the results of experimental work on the physiological responses to toxicity and deficiency. The book concludes with a review of data on the human health consequences of high and low selenium intakes. Particular attention is given to the evaluation of past studies claiming a carcinogenic effect and more recent studies suggesting a protective effect against certain cancers in experimental animals.

HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION
7782-49-2	SELENIUM COMPOUNDS, AS SE

ISBN 92-4-154260-8

WHO Environmental Health Criteria, No. 60, Principles and Methods for the Assessment of Neurotoxicity Associated with Exposure to Chemicals
World Health Organization
1986, 180p, $9.60

Abstract: A detailed evaluation of the principles and methods currently used to explore the association between exposure to chemicals and the development of adverse neurobehavioural changes. The book is divided into five sections. The first deals with general factors to be considered in the design of neurotoxicity studies and in the statistical analysis of their results. The remaining sections provide extensive information on methods developed in each of the four major research disciplines that contribute to the neurotoxic assessment of environmental chemicals. The first two sections cover methods used in the fields of behavioural toxicology and neurophysiology. The third section assesses neuromorphological methods that have been developed for the pathological assessment of nervous tissue. Basic principles of experimental design and execution are described together with the main limitations and pitfalls of these approaches. The book concludes with information on the uses of endocrinological and biochemical methods to monitor exposure and elucidate the basic mechanisms of neurotoxicity.

HA HEALTH ASSESSMENT
TT TOXICITY TESTING
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154266-7

WHO Environmental Health Criteria, No. 66, Kelevan
World Health Organization
1986, 32p, $3.60

Abstract: Kelevan is a chlordecone derivative used in a number of countries as an insecticide, mainly for the control of the potato beetle and the banana root borer. Lelevan is metabolized in the mammalian body and in the environment back to chlodecone. Though kelevan, which is moderately toxic, is degraded quite rapidly to other caged structure products, its major metabolite is known to persist in the soil for several years. This report assesses available data on the risks for human health and the environment posed by kelevan. The opening sections summarize what is known about the properties of kelevan, sources of exposure, environmental transport and distribution, biotransformation and degradation, levels in the environment, and kinetics and metabolism. A section devoted to the effects of kelevan on organisms in the environment concentrates on the findings from a very limited number of studies conducted in rainbow trout, honey bees, domestic hens, and soil microarthropods. In view of the sparsity of data on kelevan, the report bases its recommendations on what is known about the toxicity of chlordecone, concluding that, unless kelevan is indispensable, it should not be used. A monograph on chlordecone is available as No. 43 in the WHO Environmental Health Criteria series.

CL-PEST PESTICIDES
HA HEALTH ASSESSMENT
WHO WORLD HEALTH ORGANIZATION

ISBN 92-4-154267-5
WHO Environmental Health Criteria, No. 67, Tetradifon
World Health Organization
1986, 47p, $4.20

Abstract: Tetradifon is a white crystalline solid used in formulation as an acaricide in agriculture and horticulture. This book evaluates data on the chemical properties of tetradifon, methods for its determination, levels in the environment, sources of exposure, and associated risks for the environment and the general population. Data from experimental studies in animals and short-term in vitro tests are also used to assess toxicity, mutagenicity, and carcinogenicity. Because of the sues of tetradifon, particular attention is given to questions of residues in soil and in food, adverse effects on terrestrial plants, birds, fish, aquatic crustacea, and bees, and risks associated with exposure in workers spraying crops. On the basis of available data, the report concludes that there are no indications that the normal recommended use of tested tetradifon products as an acaricide causes any health or safety hazards for the general population, exposed workers, or the environment. The report also notes the importance of following recommended application rates and recommended standards for the control of product quality.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
SA	SOURCE ASSESSMENT
TT	TOXICITY TESTING
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-4-170069-6
Estimating Human Exposure to Air Pollutants, WHO Offset Publication, No. 69
World Health Organization
1982, 59 p., $4.00

Abstract Not Available

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-832-0113-2
IARC Scientific Publication No. 13. Environmental Pollution and Carcinogenic Risks
International Agency for Research on Cancer
1976, 473 p., $25.00

Abstract: Summary contents: Atmospheric pollution - Water pollution - Occupational pollution - Radiation pollution - Identification of carcinogens - Assessment of carcinogenic risk - Measuring potential carcinogens in the environment - Industrial and legal aspects.

CL-CARCIN	CARCINOGENS
CL-RAD	RADIATION
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
RA	RISK ASSESSMENT

ISBN 92-832-1116-2
IARC Scientific Publication No. 16. Air Pollution and Cancer in Man
International Agency for Research on Cancer
1977, 331 p., $45.00

Abstract: Describes in detail studies on car exhaust fumes and their carcinogenicity, air pollution monitoring systems and the registration of data concerning cancers possibly produced by air pollution. A very full discussion of the epidemiology of lung cancer covers several countries in Europe and the USA.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
RA	RISK ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT

ISBN 92-832-1119-7
IARC Scientific Publication No. 19. Environmental Aspects of N-Nitroso Compounds
International Agency for Research on Cancer
1978, 566 p., $50.00

Abstract: Contains sections on methods of analysis, chemistry and formation, occurrence and precursors, biology, and safety. Discussion of the papers presented at the meeting enabled expert groups to draw up guidelines for future work.

CL-NITROSO	NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1122-7
IARC SCIENTIFIC PUBLICATIONS NO. 22. ENVIRONMENTAL CARCINOGENS. SELECTED METHODS OF ANALYSIS. VOLUME 2. METHODS FOR THE MEASUREMENT OF VINYL CLORIDE IN POLY (VINYL CHLORIDE), AIR, WATER AND FOODSTUFFS
INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
1978, 142 p., $37.50

Abstract: Reviews the available data on the carcinogenicity of vinyl chloride, presents the monitoring requirements for industry, and reviews the techniques of measurement and monitoring. Eight methods for the determination of vinyl chloride are described in detail and presented in the format recommended by the International Organization for Standardization. Methods for the preparation of calibration standards are also given.

AM	AMBIENT MONITORING
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
SS	SOURCE SAMPLING
75-01-4	VINYL CHLORIDE

ISBN 92-832-1130-8
IARC Scientific Publications No. 30. Biological Effects of Mineral Fibres
International Agency for Research on Cancer
1979, $30.00

Abstract: Volume 1. Dust physics and chemistry; pathology of asbestos-- related disease; experimental pathology (in vivo studies) related to asbestos and other mineral fibres; experimental pathology (in vitro studies) related to asbestos and other mineral fibres (1980) pages 1-494, 117 figures. Volume 2: Clinical and radiological observations on asbestos-related pathology; epidemiology of asbestos-related disease, scientific basis for environmental control of fibres; general discussion on asbestos; dust physics and chemistry of other minerals fibres; clinical and radiological observations on mineral-fibre-related pathology; epidemiology of groups exposed to other mineral fibres; general discussion on other mineral fibres (1980) pages 496-1007, 47 figures.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
1332-21-4	ASBESTOS

ISBN 92-832-1140-5
IARC Scientific Publications No. 40. Environmental Carcinogens. Selected Methods of Analysis. Volume 4. Some Aromatic Amines and Azo Dyes in the General and Industrial Environment
International Agency for Research on Cancer
1981, 347 p., $30.00

Abstract: Although originally exposure to aromatic amines was mainly a problem of industrial hygiene, there is now a general environmental problem from exposure to such amines as phenacetin, certain dyes, pigments and food pyrolysates, and the relevant analytical procedures are included in this volume. Since aromatic amines can also be formed by in vivo metabolic processes, two chapters are devoted to these biological aspects.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
62-44-2	ACETOPHENETIDIDE,P-

ISBN 92-832-1141-3
IARC Scientific Publications No. 41. N-Nitroso Compounds: Occurrence and Biological Effects
International Agency for Research on Cancer
1982, 755 p., $55.00

Abstract Not Available

CL-NITROSO	NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1146-4
IARC Scientific Publications No. 46. Directory of On-Going Research in Cancer Epidemiology 1982
International Agency for Research on Cancer
1982, 722 p., $20.00

Abstract Not Available

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
RA	RISK ASSESSMENT

ISBN 92-832-1204-5
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 4: Some Aromatic Amines, Hydrazine and Related Substances, N-Nitroso Compounds and Miscellaneous Alkylating Agents
International Agency for Research on Cancer
1974, 286 p., $9.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-AMINE	AMINES
CL-NITROSO	NITROSO COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
302-01-2	HYDRAZINE

ISBN 92-832-1205-3
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 5: Some Organochlorine Pesticides
International Agency for Research on Cancer
1974, 241 p., $9.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1207-X
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 7: Some Anti-Thyroid and Related Substances, Nitrofurans and Industrial Chemicals
International Agency for Research on Cancer
1974, 326 p., $16.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1208-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 8: Some Aromatic Azo Compounds
International Agency for Research on Cancer
1975, 357 p., $18.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1209-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 9: Some Aziridines, N-, S- & O-mustards and Selenium
International Agency for Research on Cancer
1975, 268 p., $13.50

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
151-56-4	ETHYLENEIMINE
7782-49-2	SELENIUM COMPOUNDS, AS SE

ISBN 92-832-1210-X
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 10: Some Naturally Occurring Substances
International Agency for Research on Cancer
1976, 353 p., $19.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1211-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 11: Cadmium, Nickel, Some Epoxides, Miscellaneous Industrial Chemicals and General Considerations on Volatile Anaesthetics
International Agency for Research on Cancer
1976, 306 p., $17.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
7440-02-0	NICKEL POWDER
7440-43-9	CADMIUM

ISBN 92-832-1212-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 12: Some Carbamates, Thiocarbamates and Carbazides
International Agency for Research on Cancer
1976, 282 p., $17.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
497-18-7	CARBOHYDRAZIDE

ISBN 92-832-1213-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 13: Some Miscellaneous Pharmaceutical Substances
International Agency for Research on Cancer
1977, 255 p., $15.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1214-2
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 14: Asbestos
International Agency for Research on Cancer
1977, 106 p., $7.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
1332-21-4 ASBESTOS

ISBN 92-832-1215-0
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 15: Some Fumigants, the Herbicides, 2,4-D and 2,4,5-T, Chlorinated Dibenzodioxins and Miscellaneous Industrial Chemicals
International Agency for Research on Cancer
1977, 354 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-PEST PESTICIDES
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
93-76-5 TRICHLOROPHENOXYACETICACID,2,4,5-
94-75-7 DICHLOROPHENOXYACETICACID,2,4-

ISBN 92-832-1216-9
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 16: Some Aromatic Amines and Related Nitro Compounds - Hair Dyes, Colouring Agents and Miscellaneous Industrial Chemicals
International Agency for Research on Cancer
1978, 400 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-AMINE AMINES
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1217-7
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 17: Some N-Nitroso Compounds
International Agency for Research on Cancer
1978, 365 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-NITROSO NITROSO COMPOUNDS
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1218-5
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 18: Polychlorinated Biphenyls and Polybrominated Biphenyls
International Agency for Research on Cancer
1978, 140 p., $10.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
11097-69-1 AROCLOR 1254
1336-36-3 POLYCHLORINATED BIPHENYLS
53469-21-9 POLYCHLORINATED BIPHENYL (AROCLOR 1242)
59536-65-1 HEXABROMOBIPHENYL, TECHNICAL GRADE

ISBN 92-832-1219-3
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 19: Some Monomers, Plastics and Synthetic Elastomers, and Acrolein
International Agency for Research on Cancer
1979, 513 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
107-02-8 ACROLEIN

ISBN 92-832-1220-7
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 20: Some Halogenated Hydrocarbons
International Agency for Research on Cancer
1979, 609 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1223-1
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 23: Some Metals and Metallic Compounds
International Agency for Research on Cancer
1980, 438 p., $25.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-METAL	METALLIC COMPOUNDS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1224-X
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 24: Some Pharmaceutical Drugs
International Agency for Research on Cancer
1980, 337 p., $20.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1225-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 25: Wood, Leather and Some Associated Industries
International Agency for Research on Cancer
1981, 412 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
24	LUMBER AND WOOD PRODUCTS
31	LEATHER AND LEATHER PRODUCTS

ISBN 92-832-1226-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 26: Some Antineoplastic and Immunosuppressive Agents
International Agency for Research on Cancer
1981, 411 p., $31.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1227-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 27: Some Aromatic Amines, Anthraquinones and Nitroso Compounds, and Inorganic Fluorides used in Drinking-Water and Dental Preparation
International Agency for Research on Cancer
1982, 341 p., $20.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-AMINE AMINES
CL-NITROSO NITROSO COMPOUNDS
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
16984-48-8 FLUORIDES
84-65-1 ANT

ISBN 92-832-1228-2
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 28: The Rubber Industry
International Agency for Research on Cancer
1982, 486 p., $35.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
28 CHEMICALS AND ALLIED PRODUCTS
282 PLASTICS MATERIALS AND SYNTHETICS

ISBN 92-832-1229-0
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 29: Some Industrial Chemicals and Dyestuffs
International Agency for Research on Cancer
1982, 416 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1230-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Volume 30: Miscellaneous Pesticides
International Agency for Research on Cancer
1983, 424 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-PEST PESTICIDES
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1232-0
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Volume 32: Polynuclear Aromatic Compounds, Part 1. Chemical, Environmental and Experimental Data
International Agency for Research on Cancer
1983, 477p, $40.00

Abstract: These monographs summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-CARCIN	CARCINOGENS
CL-POM	POLYCYCLIC ORGANIC MATTER
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1233-9
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Volume 33: Polynuclear Aromatic Compounds, Part 2. Carbon Blacks, Mineral Oils and Some Nitroarenes
International Agency for Research on Cancer
1984, 245p, $25.00

Abstract: These monographs summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
1333-37-2	IRON OXIDE
1333-86-4	CARBON BLACK

ISBN 92-832-1234-7
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. Volume 34: Polynuclear Aromatic Compounds, Part 3. Industrial Exposures in Aluminum Production, Coal Gasification, Coke Production, and Iron and Steel Founding
International Agency for Research on Cancer
1984, 219p, $24.00

Abstract: These monographs summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-CARCIN	CARCINOGENS
CL-POM	POLYCYCLIC ORGANIC MATTER
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
33	PRIMARY METAL INDUSTRIES

ISBN 92-832-1309-2
Information Bulletin on the Survey of Chemicals Being Tested for Carcinogenicity, Number 9
International Agency for Research on Cancer
1981, 289 p., $20.50

Abstract: This Bulletin results from a project the objective of which is to survey on-going research on long-term carcinogenicity testing throughout the world. The major aims are to avoid unnecessary duplication of research, to increase communication among scientists, and to make a census of available research facilities as well as of chemicals which are being tested. The Bulletin lists: name of chemical under investigation; use category; animal species, strains and number of animals; route of exposure and dose levels; stage of experiments; principal investigator(s); and references to published reports of completed studies.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1310-6
Information Bulletin on the Survey of Chemicals Being Tested for Carcinogenicity, Number 10
International Agency for Research on Cancer
1982, 320 p., $21.00

Abstract: This Bulletin results from a project the objective of which is to survey on-going research on long-term carcinogenicity testing throughout the world. The major aims are to avoid unnecessary duplication of research, to increase communication among scientists, and to make a census of available research facilities as well as of chemicals which are being tested. The Bulletin lists: name of chemical under investigation; use category; animal species, strains and number of animals; route of exposure and dose levels; stage of experiments; principal investigator(s); and references to published reports of completed studies.

CL-CARCIN CARCINOGENS
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1311-4
Information Bulletin on the Survey of Chemicals Being Tested for Carcinogenicity, Number 11
International Agency for Research on Cancer
1984, 365p, $25.00

Abstract: This Bulletin results from a project to survey on-going research on long-term carcinogenicity testing throughout the world. The major aims are to avoid unnecessary duplication of research, to increase communication among scientists, and to make a census of available research facilities as well as of chemicals which are being tested. The Bulletin lists: name of chemical under investigation, animal species, strains and number of animals; route of exposure and dose levels; stage of experiments; principal investigator(s); and references to published reports of completed studies.

CL-CARCIN CARCINOGENS
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1402-1
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 1: Chemicals and Industrial Processes Associated with Cancer in Humans (IARC Monographs 1-20)
International Agency for Research on Cancer
1979, 71 p., $5.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

CL-ORGANIC ORGANIC COMPOUNDS
HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1404-8
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 2: Long-Term and Short-Term Screening Assays for Carcinogens: A Critical Appraisal
International Agency for Research on Cancer
1980, 426 p., $20.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1405-6
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 3: Cross Index of Synonyms and Trade Names in Volume 1 to 26
International Agency for Research on Cancer
1982, 199 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1406-4
IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Humans. Supplement No. 4: Chemicals, Industrial Processes and Industries associated with Cancer in Humans (IARC Monographs, Volumes 1 to 29)
International Agency for Research on Cancer
1982, 292 p., $30.00

Abstract: These monographs (entitled IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man up to No. 16) summarize the evidence for the carcinogenicity of individual chemicals in a condensed uniform manner for easy comparison. The data were compiled, reviewed and evaluated by a working group of experts. No recommendations are given concerning preventive measures or legislation. As new data on chemicals for which monographs have already been written and new principles for evaluation become available, re-evaluation is made at further meetings, and revised monographs are published as necessary.

HA HEALTH ASSESSMENT
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

ISBN 92-832-1536-2
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Volume 36, Allyl Compounds, Aldehydes, Epoxides and Peroxides
International Agency for Research on Cancer
1985, 369p, $35.00

Abstract: An expert evaluation of all published data useful in determining the carcinogenic risk posed by 14 allyl compounds, aldehydes, epoxides and peroxides. Substances were selected on the basis of their broad spectrum of utility, potential for widespread exposure, and likelihood that exposure may be associated with carcinogenicity in man. Each substance is assessed in terms of chemical and physical data, information on production, use, and natural or industrial occurrence, and currently available methods of analysis. In the most extensive section of each monograph, readers will find a review and evaluation of all recorded biological data derived from carcinogenicity studies in animals, from experimental test systems, including short-term tests, and from case reports and epidemiological studies. Conclusions, which represent the collective views and opinions of a working group sponsored by the International Agency for Research on Cancer, are intended to assist national and international authorities who must formulate decisions concerning the regulation of recognized or suspected chemical carcinogens. The book also features an appendix of activity profiles for short-term tests classified according to the end-point detected.

CL-ALDEHYD ALDEHYDES
ES EPIDEMIOLOGY STUDY
IARC INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
WHO WORLD HEALTH ORGANIZATION

ISBN 92-832-1538-9
IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans, Volume 38, Tobacco Smoking
International Agency for Research on Cancer
1986, 421p, $45.00

Abstract: A critical review of the many complex lines of evidence linking tobacco smoking to human cancers. The book cites well over 1000 published studies in an effort to identify all points of consensus or controversy surrounding reseaech in this field. Specific topics range from the role of tobacco in farm economics and international trade to a comparison of different methods and models for investigating health risks in nonsmokers exposed to sidestream smoke. Data from animal studies and tests in eukaryotic systems are used to evaluate the toxicity, immunotoxicity, metabolic effects, and mutagenicity of tobacco smoke. Observations in humans are discussed in terms of factors influencing the extent of inhalation, deposition of smoke on bronchi, alterations in host defence mechanisms, genetic susceptibility, and methods for the biological measure of the extent and effects of exposure. The book concludes with a review of epidemiological findings linking tobacco smoking to human cancers at nine organ sites. For each, an effort is made to determine both the proportion of risk currently attributable to smoking and the identity and importance of interactions with other causative factors. The epidemiology of cancers related to passive exposure to tobacco smoke is covered in a separate section.

CL-ETS	ENVIRONMENTAL TOBACCO SMOKE
IARC	INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
TT	TOXICITY TESTING
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-890-1244-7
Indoor Air Pollutants: Exposure and Health Effects. Report on a WHO Meeting (Nordlingen, Federal Republic of Germany, 1982)
World Health Organization
1983, 42p, EURO Reports and Studies No. 78, $2.00

Abstract: This report discusses a meeting of the WHO Working Group on Assessment and Monitoring of Exposure to Indoor Pollutants. The purpose of the meeting was to review the results of prior work in the field of indoor air quality, as well as work currently in progress or planned, in order to evaluate the extent to which such work is likely to provide early estimates of actual population exposures and the extent of the health impacts that can be associated with them. The working group also considered the relative contributions and limitations of laboratory characterizations of sources of pollutants; model predictions of such concentrations in actual spaces; field monitoring of pollutant concentrations; personal monitoring; and health effect determinations in the laboratory and in the field. Finally, the group discussed the need for and benefit of simultaneous studies in a number of countries and the coordination of such studies in time, approach and design, bearing in mind that the priorities of the component disciplines involved would not necessarily coincide with those needed to arrive at a rapid assessment of the overall health impact of indoor air pollution in its present form.

CL-IAP	INDOOR AIR POLLUTANTS
EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

ISBN 92-9020-196-7
Toxicological Appraisal of Halogenated Aromatic Compounds following Groundwater Pollution, Report of a WHO Working Group
World Health Organization
1980, 58 p., $4.00

Abstract Not Available

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
HA	HEALTH ASSESSMENT
WHO	WORLD HEALTH ORGANIZATION

MA0185001
Dioxin: An Assessment of Sources and Health Effects in the Common wealth of Massachusetts
Department of Environmental Quality Engineering, and the Depart·
MA0185001 MA01003004017GA DEPT. OF NATURAL RESOURCES, AIR
MA DEPT OF ENV. QUALITY ENG.,DIV. OF AIR QUALITY CONTROL
12/01/85, 114 pages

Dioxin in its various forms is recognized as one of the most toxic and mechanisms which determine its effect on human health and the environment. The Governor's plan for solid waste disposal would rely heavily on the use of resource recovery facilities to dispose of refuse in Massachusetts. This increased reliance on resource recovery together with public interest in several proposed resource recovery facilities has highlighted the need for the most recent data on dioxin emissions and health effects.
In response to the need for the most recent information as well as public health concerns related to dioxin emissions, the Department of Environmental Quality Engineering (DEQE) has initiated a study of the characteristics, sources and health effects associated with dioxin and related compounds. The objective of this study is to summarize the current state of knowledge concerning dioxin in the environment. The study identifies those areas where significant technical uncertainty exists as well as those areas in which adequate information may be found.

CL-DIOXIN	DIOXINS
CL-FURAN	FURANS
HA	HEALTH ASSESSMENT
SA	SOURCE ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
110-00-9	FURAN
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

MA0185002
The Chemical Health Effects Assessment Methodology and the Method to Derive Acceptable Ambient Levels (CHEM and AAL)
The Department of Environmental Quality Engineering
MA DEPT OF ENV. QUALITY ENG.,DIV. OF AIR QUALITY CONTROL
06/01/85, 600 pages

The Chemical Health Effects Assessment Methodology (CHEM) and the process which composes the health basis of the Massachusetts Department of Environmental Quality Engineering air toxics program. Using valid epidemiological, clinical, and experimental data from primary sources and peer-reviewed secondary sources, CHEM asystematically identifies and evaluates the following potential adverse health effects of chemical substances: acute/chronic toxicity, carciongenicity, mutagenicity, and developmental/reproductive toxicity. The method to derive AALs establishes ambient air levels for specific chemical substances based on the health data provided by CHEM; the health data are incorporated through a series of adjustment and safety factors applied to selected occupational limits to provide protection for the general public against continuous exposure and to account for gaps and inadequacies in the data. The Department believes that CHEM and AAL offers a viable tool for protecting public health and decreasing risk form effects of exposure to toxic air pollutants.

HA	HEALTH ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
100-44-7	BENZYL CHLORIDE
106-44-5	CRESOL,P-
106-46-7	DICHLOROBENZENE,1,4-
106-48-9	CHLOROPHENOL,P-
106-89-8	EPICHLOROHYDRIN
106-99-0	BUTADIENE,1,3-
107-06-2	ETHYLENE DICHLORIDE
107-13-1	ACRYLONITRILE
107-21-1	ETHYLENE GLYCOL
108-05-4	VINYL ACETATE
108-21-4	ISOPROPYL ACETATE
108-31-6	MALEIC ANHYDRIDE
108-38-3	XYLENE,M-
108-43-0	CHLOROPHENOL,M-
108-46-3	RESORCINOL
108-88-3	TOLUENE
108-90-7	MONOCHLOROBENZENE
108-95-2	PHENOL
109-86-4	METHOXYETHANOL,2-
109-89-7	DIETHYLAMINE
109-99-9	TETRAHYDROFURAN
110-19-0	ISOBUTYL ACETATE

MA0185002 (continued)

110-82-7	CYCLOHEXANE
117-81-7	ETHYLHEXYLPHTHALATE,BIS,2-
121-44-8	TRIETHYLAMINE
122-39-4	PHENYLBENZENAMINE,N-
123-91-1	DIOXANE,1,4-
123-92-2	ISOAMYL ACETATE
126-99-8	CHLOROBUTADIENE,2-,1,3-
127-18-4	TETRACHLOROETHYLENE
1313-99-1	NICKEL OXIDE
1314-62-1	VANADIUM PENTOXIDE
1335-32-6	LEAD ACETATE
1336-36-3	POLYCHLORINATED BIPHENYLS
13765-19-0	CALCIUM CHROMATE, ANHYDROUS
140-88-5	ETHYL ACRYLATE (INHIBITED)
141-78-6	ETHYL ACETATE
16984-48-8	FLUORIDES
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
2385-85-5	MIREX
302-01-2	HYDRAZINE
50-00-0	FORMALDEHYDE
540-59-0	DICHLOROETHYLENE,1,2-,CIS-TRANS-
56-23-5	CARBON TETRACHLORIDE
57-74-9	CHLORDANE
58-89-9	GAMMA-HEXACHLORO-CYCLOHEXANE
591-78-6	HEXANONE,2-
60-29-7	ETHYL ETHER
62-53-3	ANILINE
67-64-1	ACETONE
67-66-3	CHLOROFORM
67-68-5	DIMETHYL SULFOXIDE
67-72-1	HEXACHLOROETHANE
68-12-2	DIMETHYLFORMAMIDE,N,N-
70-30-4	HEXACHLOROPHENE
71-23-8	PROPYL ALCOHOL
71-36-3	BUTYL ALCOHOL
71-43-2	BENZENE
71-55-6	TRICHLOROETHANE,1,1,1-
74-83-9	METHYL BROMIDE
74-85-1	ETHYLENE
7439-92-1	LEAD POWDER
7440-02-2	NICKEL
7440-41-7	BERYLLIUM
7440-43-9	CADMIUM
7440-47-3	CHROMIUM
7446-34-6	SELENIUM SULFIDE
75-00-3	CHLOROETHANE
75-01-4	VINYL CHLORIDE
75-05-4	VINYLIDENE CHLORIDE
75-07-0	ACETALDEHYDE
75-09-2	METHYLENE CHLORIDE

MA0185002 (continued)

75-56-9	PROPYLENE OXIDE
76-12-0	TETRACHLORODIFLUOROETHANE,1,1,2,2-,1,2-
76-44-8	HEPTACHLOR
7664-39-3	HYDROGEN FLUORIDE
7664-41-7	AMMONIA
7782-49-2	SELENIUM COMPOUNDS, AS SE
7782-50-5	CHLORINE
7783-06-4	HYDROGEN SULFIDE
78-83-1	ISOBUTYL ALCOHOL
78-87-5	DICHLOROPROPANE,1,2-
79-00-5	TRICHLOROETHANE,1,1,2-
79-01-6	TRICHLOROETHYLENE
79-34-5	TETRACHLOROETHANE,1,1,2,2-
80-62-6	METHYL METHACRYLATE
85-44-9	PHTHALIC ANHYDRIDE
87-86-5	PENTACHLOROPHENOL
91-20-3	NAPHTHALENE
92-52-4	BIPHENYL
95-50-1	DICHLOROBENZENE,1,2-
95-95-4	TRICHLOROPHENOL,2,4,5-
96-33-3	METHYL ACRYLATE
98-95-3	NITROBENZENE

MD01TM86-02

AMBIENT AIR QUALITY IMPACT SCREENING MODEL PROCEDURES FOR TOXIC AIR POLLUTANTS.
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
MARYLAND AIR MANAGEMENT ADMINISTRATION
11/01/86, 46 pages

THIS TECHNICAL DOCUMENT IS INTENDED TO ASSIST SOURCES IN CALCULATING AMBIENT LEVELS OF TOXIC AIR POLLUTANTS (TAPS) TO DETERMINE COMPLIANCE WITH MARYLAND'S DRAFT AIR TOXICS REGULATIONS. THE DOCUMENT OUTLINES, STEP-BY-STEP, SIMPLE SCREENING MODEL PROCEDURES FOR ESTIMATIMNG AMBIENT CONCENTRATIONS OF TAPS. THE PROCEDURES ALSO ALLOW A SOURCE TO CALCULATE THE EMISSION RATE WHICH WOULD CREATE A CONCENTRATION EQUAL TO THE SCREENING LEVEL OF THE SUBSTANCE DISCHARGED. THE PROCEDURES HAVE BEEM DEVELOPED TO MINIMIZE THE VARIABLES INVOLVED AND REQUIRE ONLY INFORMATION DESCRIBING EMISSIONS AND SOURCE CHARACTERISTICS. BOTH POINT SOURCES (I.E. STACK AND VENTS) AND AREA SOURCES (I.E. FUGITIVE EMISSIONS, STOCKPILES) CAN BE EASILY EVALUATED USING THESE PROCEDURES. IT MUST BE POINTED OUT THAT THESE PROCEDURES WILL ALMOST ALWAYS OVERESTIMATE ACTUAL AMBIENT CONCENTRATIONS. (PRICE: $3.)

PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC	STATE OR LOCAL AGENCY

MD018601
MARYLAND'S AIR TOXIC CONTROL PROGRAM: WORKING GROUP DELIBERATIONS.
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
SUSAN S.G. WIERMAN, GEORGE S. ABURN, DOROTHY M. GUY, JOEL H. COOPER.
05/01/86, 170 pages

THIS DOCUMENT CONTAINS THE MINUTES OF 10 MEETINGS OF A WORKING GROUP FORMED TO ASSIST MARYLAND IN DEVELOPING DRAFT AIR TOXIC REGULATIONS. THE GROUP, FORMED TO ENSURE THAT ALL INTERESTS WERE CONSIDERED, REPRES ENTED THE BUSINESS COMMUNITY, ENVIRONMENTAL GROUPS, THE STATE LEGISLATURE, EPA, AND ACADEMIA. THE WORKING GROUP PROVIDED A FORUM FOR IDENTIFYING AND RESOLVING ISSUES OF CONCERN ASSOCIATED WITH THE DRAFT REGULATIONS. THE DOCUMENT ALSO EXPLAINS MARYLAND'S PRELIMINARY PROPOSED PROGRAM DESIGN. (PRICE: $5.)

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

MD018602
DEVELOPING AN AIR TOXICS CONTROL PROGRAM FOR THE STATE OF MARYLAND.
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
ABURN, GEORGE S. JR., FERRERI, GEORGE P., AND WIERMAN, SUSAN S.G.
06/01/87, 9 pages

THIS PAPER PRESENTED AT THE 79TH ANNUAL MEETING OF THE AIR POLLUTION CONTROL ASSOCIATION IN MINNEAPOLIS, MINNESOTA, DESCRIBES THE PROCESS MARYLAND HAS USED IN DEVELOPING ITS AIR TOXICS CONTROL PROGRAM, BRIEFLY SUMMARIZES THE PRELIMINARY PROGRAM DESIGN, AND IDENTIFIES ISSUES THAT HAVE ARISIN IN THIS PROCESS. THE AUTHORS' INTENT IS TO PROVIDE INFORMATION THAT MAY VE USEFUL TO OTHER STATES INVOLVED IN SIMILAR PROJECTS.

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

MD018603
RISK ASSESSMENT AND MARYLAND'S PROPOSED AIR TOXICS PROGRAM
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
MARYLAND AIR MANAGEMENT ADMINISTRATION
09/01/87, 256 pages

THIS DOCUMENT CONTAINS THE PROCEEDINGS OF A SEMINAR ON RISK ASSESSMENT HELD IN THE BALTIMORE AREA ON SEPTIMBER 18, 1986.

SPEAKERS AT THE SEMINAR INCLUDED REGION III ADMINISTRATOR JAMES SEIF; DR. PETER PREUSS, DIRECTOR OF EPA'S OFFICE OF HEALTH AND ENVIRONMENTAL ASSESSMENT; AND DR. MORTON CORN, DIRECTOR OF THE DIVISION OF ENVIRONMENTAL HEALTH ENGINEERING AT THE JOHNS HOPKINS UNIVERSITY.

THE PROCEEDINGS CONTAIN EPA'S NONTECHNICAL REVIEW OF THE PRINCIPLES OF RISK ASSESSMENT, DR. CORN'S CRITIQUE OF THE USE OF THRESHOLD LIMIT VALUES TO ESTABLISH AMBIENT GUIDELINES FOR CARCINOGENS, EPA'S SUMMARY REPORT ON A DIOXIN ANALYSIS OF PHILADELPHIA'S NORTHWEST INCINERATOR, AND OTHER PAPERS ON RISK ASSESSMENT, RISK MANAGEMENT, RISK COMMUNICATION, EPA'S AIR TOXICS POLICY, AND MARYLAND'S DRAFT AIR TOXICS REGULATIONS. (PRICE: $7.)

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

MD018604
ANALYSIS OF THE ECONOMIC IMPACT OF MARYLAND'S PROPOSED AIR TOXIC REGULATIONS
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
MARYLAND AIR MANAGEMENT ADMINISTRATION
12/01/86, 87 pages

THIS DOCUMENT DISCUSSES THE COSTS OF COMPLYING WITH THE MARYLAND'S DRAFT AIR TOXICS REGULATIONS. THE APPENDIX ANALYZES COSTS TO CONTROL FOUR HYPOTHETICAL EMISSIONS SOURCES.

COST TO BUSINESS WILL PRIMARILY RESULT FROM ESTIMATING EMISSIONS, MODELING THE IMPACT OF THESE EMISSIONS ON AMBIENT AIR QUALITY, AND CONTROLLING EMISSIONS. THE TOTAL COSTS TO ALL REGULATED BUSINESSES IS ESTIMATED TO RANGE FROM $350,000-$830,000 PER YEAR FOR THE FIRST FOUR YEARS AFTER THE REGULATIONS ARE ADOPTED.

A FEW SOURCES MAY INCUR SUBSTANTIAL COSTS FOR EMISSIONS CONTROLS BEYOND THOSE REQUIRED BY OTHER REGULATIONS. CONTROL COSTS WILL VARY FROM ZERO TO SEVERAL HUNDRED THOUSAND DOLLARS OR MORE. COSTS FOR SOURCES THAT MUST CONTROL EMISSIONS WILL BE RELATED TO THE PUBLIC HEALTH RISKS THEIR EMISSIONS CAUSE.

COSTS TO THE STATE ARE EXPECTED TO BE ABOUT $250,000 FOR EQUIPMENT AND ABOUT $250,000 PER YEAR FOR PERSONNEL AND OTHER OPERATING COSTS. (PRICE: $2.)

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

MD018605
MARYLAND'S DRAFT AIR TOXICS REGULATIONS
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
MARYLAND AIR MANAGEMENT ADMINISTRATION
12/01/86, 41 pages

THIS IS THE MOST RECENT DRAFT OF MARYLAND'S AIR TOXICS REGULATIONS. ADDITIONAL CHANGES ARE EXPECTED PRIOR TO ADOPTION. ADOPTION DATE UNCERTAIN.

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

MD018701
TOXIC AIR POLLUTANTS COVERED BY MARYLAND'S PROPOSED AIR TOXICS REGULATIONS
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
MARYLAND AIR MANAGEMENT ADMINISTRATION
02/01/87, 79 pages

THIS DOCUMENT EXPLAINS THE SUBSTANCES COVERED BY MARYLAND'S PROPOSED AIR TOXICS PROGRAM. MARYLAND CLASSIFIES CARCINOGENS AS CLASS I TOXIC AIR POLLUTANTS (TAPS) AND OTHER TOXICS AS CLASS II TAPS. CLASS I TAPS ARE CARCINOGENS IDENTIFIED BY THE INTENATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) AND THE NATIONAL TOXICOLOGY PROGRAM (NTP). TO DEFINE CLASS II TAPS, MARYLAND USED OSHA'S HEALTH HAZARD CRITERIA. THIS DEFINITION OF CLASS II TAPS IS OPEN-ENDED, AND THERE IS NO LIST OF ALL CLASS II TAPS. MARYLAND HAS ESTABLISHED PRIORITY LISTS OF TAPS TO DEFINE AND LIMIT THE PROGRAM FOR EXISTING SOURCES. THE APPENDICES INCLUDE AN ANNOTATED LIST OF CARCINOGENS, THE IARC TOXIC AIR POLLUTANTS COVERED BY MARYLAND'S PROPOSED AIR TOXICS REGULATIONS PROCESS FOR EVALUATING CARCINOGENIC RISK, AND THE PRIORITY LIST OF CLASS I AND CLASS II TAPS FOR EXISTING SOURCES. (PRICE: $2.).

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

MD018702
A BRIEF EXPLANATION OF MARYLAND'S DRAFT AIR TOXICS REGULATIONS,
MD DEPT. OF HEALTH & MENTAL HYGIENE, AIR MANAGEMENT ADMIN.
MARYLAND AIR MANAGEMENT ADMINISTRATION
05/01/87, 7 pages

THIS NON-TECHNICAL PAPER HIGHLIGHTS SECTIONS OF MARYLAND'S DRAFT AIR TOXIC REGULATIONS. IT EXPLAINS WHICH BROAD CATEGORIES OF POLLUTANTS ARE EXCLUDED AND HOW POLLUTANTS COVERED BY THE REGULATIONS ARE CLASSIFIED. THE PAPER EXPLAINS WHICH SOURCES ARE COVERED AND WHICH ARE EXEMPTED. IT ALSO EXPLAINS THREE GENERAL REQUIREMENTS: TO QUANTIFY EMISSIONS; TO USE T-BACT; AND, TO NOT UNREASONABLY ENDANGER HUMAN HEALTH, ALSO KNOWN AS THE AMBIENT IMPACT REQUIREMENT. THE PAPER BRIEFLY EXPLAINS THREE OPTIONS WHICH A SOURCE MAY USE TO DEMONSTRATE COMPLIANCE WITH THE AMBIENT IMPACT REQUIREMENT.

PD AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC STATE OR LOCAL AGENCY

MN0185001
Open Burning of Creosote Treated Rail Ties
MN POLLUTION CONTROL AGENCY, DIV. OF AIR QUALITY
D. Becker, G.S. Eckhardt, T. Johnson, and J. Seltz
07/01/84, 8p pages

Approximately 22 million railroad ties are replaced annually across the spent ties. With the enactment of the Clean Air Act, open burning practices were banned in many states and ties were often abandoned a- long the right of ways. Railroad companies would like to open burn spent ties due to the relative low cost. It is also argued that open burning creates little harm since it is often conducted in rural areas In order to assess potential health effects from the open burning of railroad ties, a series of open test burns were conducted. An air monitoring nec work was deployed to monitor ambient concentrations of particulate emanating from the burns. Samples were analyzed for total suspended particulate and 16 polycyclic organic matter compounds. Using dispersion models, particulate emission rates were back calcu- lated. Health risk assessment techniques were used to estimate cancer risk to potentially exposed populations. Results of laboratory analy- ses showed the presence of various compounds in the emissions, some of which are known carcinogens. Health risk assessment analyses show tha single short term exposures to the emissions result in risk in eliciti cancer of less than 1/12,000,000 whereas multiple exposures to the e- missions over a lifetime may pose a cancer risk of up to 1/860,000.

STATE/LOC STATE OR LOCAL AGENCY
40 RAILROAD TRANSPORTATION
401 RAILROADS
4011 RAILROADS, LINE-HAUL OPERATING

MT0185001
Montana Air Pollution Study, Final Report
MT DEPT. OF HEALTH AND ENV. SCIENCES, AIR QUALITY BUREAU
Stephen Medvec
06/01/81, 116 pages

This report summarizes the final results of the Montana Air Pollution Department of Health and Environmental Sciences designed to develop an improved understanding of how air pollution affects human health in Montana.
The following types of health effects studies were conducted under the project: pulmonary function testing of normal school children and persons with respiratory diseases, screening for the presence of carcinogenic substances in children's urine in the Butte-Anaconda area, a hospital admissions data study as related to air pollution episodes, and a mortality study to determine numbers of deaths pos sible related to air pollution in three counties during the period 1970-1975. Corresponding air monitoring and meteorological data also were gathered.
The MAPS study concludes that increased air pollution levels cause a decrease in lung function among both adults with COPD and school-age children.

ES	EPIDEMIOLOGY STUDY
STATE/LOC	STATE OR LOCAL AGENCY

NESHAP PHASE I
National Emission Standards for Hazardous Air Pollutants Phase I Technical Information
EPA, Research Triangle Park, NC, OAQPS
DATES VARY, LENGTHS VARY, FREE

Abstract: The development of a National Emission Standard for Hazardous Pollutants (NESHAP) is done in three phases. In Phase I assessment is made to determine whether a standard should be developed for the pollutant and processes under scrutiny. Emphasis is placed on gathering information about the pollutant, processes, and control equipment, as well as the technical business aspects of the industries involved. Phases II and III involve standard development, proposal, and promulgation. Much of the information gathered in Phase I is documented in an information memorandum with an attached technical report, which Clearinghouse users may find helpful. The following is a list of the source categories for which technical memoranda have been prepared. They can be obtained by contacting the Pollutant Assessment Branch, Strategies and Air Standards Division, Office of Air Quality Planning and Standards, U.S. EPA Research Triangle Park, North Carolina 27711, (919) 541-5346 or FTS 629-5346.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
106-99-0	BUTADIENE,1,3-
107-06-0	ETHYLENE DICHLORIDE
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
283	DRUGS
2834	PHARMACEUTICAL PREPARATIONS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7216	DRY CLEANING PLANTS, EXCEPT RUG
75-01-4	VINYL CHLORIDE
75-09-2	METHYLENE CHLORIDE
75-21-8	ETHYLENE OXIDE
79-01-6	TRICHLOROETHYLENE
80	HEALTH SERVICES
806	HOSPITALS
8062	GENERAL MEDICAL & SURGICAL HOSPITALS

NIEHS BIBLIOGRAPHY
National Institute of Environmental Health Sciences Bibliography 1966-1985
NIEHS 1986, 528p, Free

Abstract: For the most part, the staff of the National Institute of Environmental Health Sciences publishes its research in journal articles, conference papers, and books rather than in technical reports. Citations to this published research are listed in the National Institute of Environmental Health Sciences Bibliography 1966-1985. Inquiries regarding the bibliography should be directed to: Library and Information Services, National Institute of Environmental Health Sciences, P. O. Box 12233, Research Triangle Park, North Carolina 27709. No lists of 1986-87 intramural research are available at this time.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIEHS	NAT'L INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES
TT	TOXICITY TESTING

NIOSH 81-106
Health Hazard Alert: OSHA/NIOSH - Benzidine-,o-Tolidine-, and o-Dianisidine-Based Dyes
National Institute of Occupational Safety and Health
1981, 21 p., AVAIL NIOSH

Abstract Not Available

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
119-90-4	DIMETHOXYBENZIDINE,3,3'-
119-93-7	DIMETHYLBENZIDINE,3,3'-
92-87-5	BENZIDINE

NIOSH 86-122
Current Intelligence Bulletin Reprints - Bulletins 31 through 47
National Institute of Occupational Safety and Health 1986, 337p, Avail. NIOSH

Abstract: No abstract is available.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

NIOSH 86-124
Current Intelligence Bulletins: Summaries - July 24, 1986
National Institute of Occupational Safety and Health
1986, 21p, Avail. NIOSH

Abstract: No abstract is available.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

NJ-01
TITLE: ROLE OF RISK ASSESSMENT IN NEW JERSEY
AUTHOR(S): JOINT COMMITTEE ON RISK ASSESSMENT POLICY
DATE OF PUBLICATION: NOVEMBER 1985
DOCUMENT TYPE: PD/RA
NUMBER OF PAGES: 21 PAGES AND APPENDICES

THIS REPORT BRIEFLY REVIEWS THE BASIC PRINCIPLES OF RISK ASSESSMENT, DESCRIBES THE RISK ASSESSMENT NEEDS OF THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE NEW JERSEY DEPARTMENT OF HEALTH, AND SUGGESTS WAYS FOR THE TWO DEPARTMENTS TO WORK TOGETHER ON RISK ASSESSMENT ISSUES.

PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
RA	RISK ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY

NT-86-087
National Toxicology Program Review of Current DHHS, DOE and EPA
NTP, Research Triangle Park, NC May 86, 333p, Free

Abstract: The document reviews basic toxicology research, toxicology testing, and toxicology method development activities in progress at the Department of Health and Human Services (DHHS), the Department of Energy (DOE) and the Environmental Protection Agency (EPA). Summaries of the dollar and manpower support for agency activities in toxicology are included. A narrative of the roles of each agency in toxicology research is given, followed by listings of projects. The test method development section contains abbreviated summaries of each test method development project, the performing organization and project number. The toxicology testing section lists information on each testing project including the chemical name, CAS number, type of study, status, performing organization and project number. The toxicology testing list is indexed in three ways: by chemical name, CAS number, and type of study. The report is available from: NTP Public Information Office, MD 82-04, P.O. Box 12233, RTP, NC 27709, (919) 541-3991.

NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING

NTP-86-086
National Toxicology Program Fiscal Year 1986 Annual Plan
NTP, Research Triangle Park, NC May 86, 354p, Free

Abstract: The National Toxicology Program (NTP) was established by the Department of Health and Human Services (DHHS) to coordinate and provide information about potentially toxic chemicals to regulatory and research agencies and to strengthen the science base in toxicology. The Annual Plan describes NTP's completed, ongoing and planned activities in toxicology research and testing. An index of chemicals being studied is also included. NTP programs in the following categories are described: allular and genetic toxicology, carcinogenesis research and applied studies, chemical disposition, chemical pathology, cutaneous toxicology, immuntoxicology, neurobehavioral toxicology, pulmonary toxicology, and reproductive and developmental toxicology. Coordinative management activities are also described. These include: chemical nomination and selection, chemical and laboratory management, data audits, chemistry resources, chemical repositories, laboratory animal resources, chemical health and safety resources, data management and analysis, information generation and dissemination, and the annual report on carcinogens. The report is available from: NTP Public Information Office, MD B2-04, P. O. Box 12233, RTP, NC 27709, (919) 541-3991.

NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING

NV02-L.VEGAS-1
ASSESSMENT OF AIR TOXICS IN LAS VEGAS, NEVADA
AIR POLLUTION CONTROL DIV., DIST. HEALTH DEPT. OF CLARK CO.
MICHAEL NAYLOR
04/01/87, 6 pages

AN ESTIMATE IS MADE OF THE ANNUAL INCIDENCE OF CANCERS IN THE LAS VEGAS VALLEY DUE TO THE FOLLOEING AIR CONTAMINANTS: ASBESTOA; BENZENE; CADMIUM; CARBON TETRA CHLORIDE; CHLOROFORM; CHROMIUM; PRODUCTS OF INCOMPLETE COMBUSTION; ETHYLENE; FORMALDEHYDE; NICKLE; PERCHLOROETHENE; AND VINYL CHLORIDE.

RA	RISK ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
127-18-4	TETRACHLOROETHYLENE
1332-21-4	ASBESTOS
50-00-0	FORMALDEHYDE
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM
71-43-2	BENZENE
74-85-1	ETHYLENE
7440-02-2	NICKEL
7440-38-2	ARSENIC AND COMPOUNDS AS AS
7440-43-9	CADMIUM
7440-47-3	CHROMIUM

OK013.8
OKLAHOMA AIR POLLUTION CONTROL REGULATION 3.8 - CONTROL OF HAZARDOUS AND TOXIC AIR CONTAMINANTS
OK DEPT. OF HEALTH, AIR QUALITY SERVICE
NA
03/09/87, 9 pages

SETS FORTH THE REQUIREMENTS FOR NESHAPS SOURCES AND SOURCES EMITTING TOXIC AIR CONTAMINANTS. DEFINES THREE CATEGORIES OF POLLUTANTS AND THE METHODOLOGY TO DETERMINE THE MAXIMUM ACCEPTABLE AMBIENT CONCENTRATIONS. SETS FORTH COMPLIANCE DEMONSTRATION METHODS.

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

PA0185001
Philadelphia Air Management Regulation VI: Control of Emissions of Toxic Air Contaminants
PA DEPT. OF ENV. RESOURCES, BUR. OF AIR QUALITY CONTROL
08/07/81, 10p pages

No abstract given.

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

PB-202 459
Background Information for Proposed New-Source Performance Standards: Steam Generators, Incinerators, Portland Cement Plants, Nitric Acid Plants, Sulfuric Acid Plants
EPA, Research Triangle Park, NC, OAP
Aug 71, 61p, APTD-0711, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
14	NONMETALLIC MINERALS, EXCEPT FUELS
142	CRUSHED AND BROKEN STONE
1422	CRUSHED AND BROKEN LIMESTONE
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB-204 876
Background Information-Proposed National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, Mercury
EPA, Research Triangle Park, NC, OAP
Dec 71, 30p, APTD-0753, PC A03/MF A01

Abstract: For asbestos, beryllium, and mercury, proposed national air pollution standards are summarized. Reviews are presented for the following: the effects on health; the nature of the problem; the development of the proposed standard; and, its economic impact. A report on atmospheric dispersion estimates is appended.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

PB-221 736
Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume I. Main Text
EPA, Research Triangle Park, NC, OAP
Jun 73, 79p, APTD-1352A, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
2952	ASPHALT FELTS AND COATINGS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
336	NONFERROUS FOUNDRIES
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS

PB-222 802
Background Information on Development of National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAP
Mar 73, 104p, APTD-1503, PC A06/MF A01

Abstract: The document provides a detailed discussion of the statements made in the preamble to the National Emission Standards for Hazardous Air Pollutants (asbestos, beryllium, and mercury). The first section of this report covering general provisions discusses: Applicability of the standards; Approval of construction or modification; Notification of startup; Waiver of compliance; Source reporting; Source sampling and analytical methods. The three remaining sections discuss the following areas for each of the three pollutants, asbestos, beryllium and mercury: (1) health effects; (2) development of the standard; (3) evaluation of comments; (4) environmental impact.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

PB-228 152
Criteria for a Recommended Standard: Occupational Exposure to Sulfur Dioxide
National Institute of Occupational Safety and Health
1974, 121 p., PC A06/MF A01
NIOSH PUB No: 74-111, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7446-09-5	SULFUR DIOXIDE

PB-229 660
Background Information for Proposed New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass or Bronze Ingot Production Plants, Iron and Steel Plants, Sewage Treatment Plants. Volume 2. Appendix: Summaries of Test Data.
EPA, Research Triangle Park, NC, OAP
Jun 73, 71p, APTD-1352B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
2952	ASPHALT FELTS AND COATINGS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
336	NONFERROUS FOUNDRIES
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS

PB-231 601
Background Information for New Source Performance Standards: Asphalt Concrete Plants, Petroleum Refineries, Storage Vessels, Secondary Lead Smelters and Refineries, Brass and Bronze Ingot Production Plants, Iron and Steel Plants, and Sewage Treatment Plants. Volume 3. Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Feb 74, 148p, APTD-1352C, EPA-450/2-74-003, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
2952	ASPHALT FELTS AND COATINGS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
336	NONFERROUS FOUNDRIES
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS

PB-232 976
Environmental Surveys of Aluminum Reduction Plants
National Institute of Occupational Safety and Health
1974, 49 p., PC A03/MF A01
NIOSH PUB No: 74-101, UNAVAIL NIOSH

Abstract: The purpose of this report is to summarize the environmental surveys of four aluminum reduction plants in the Eastern United States, including pre-baked, horizontal pin Soderberg and vertical pin Soderberg operations. The major emphasis of the envionmental studies was to determine the extent of worker exposures to potential carcinogenic compounds found in coal tar and petroleum pitch volatiles; however, exposures to total airborne dust, airborne fluorides, carbon monoxide, sulfur dioxide, ammonia and noise also were documented. The report presents a description of aluminum reduction processing and associated worker activities for the three production types that were surveyed, the environmental sampling procedures utilized, a summary of sampling results and conclusions that can be drawn from the surveys.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
630-08-0	CARBON MONOXIDE
7664-41-7	AMMONIA
8007-45-2	COAL TAR PITCH VOLATILES

PB-233 098
Criteria for a Recommended Standard: Occupational Exposure to Sulfuric Acid
National Institute of Occupational Safety and Health
1974, 90 p., PC A05/MF A01
NIOSH PUB No: 74-128, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7664-93-9	SULFURIC ACID

PB-237 169
Background Information on National Emission Standards for Hazardous Air pollutants - Proposed Amendments to Standards for Asbestos and Mercury
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 150p, EPA-450/2-74-009A, PC A07/MF A01

Abstract: Rationale for amendments promulgated April 6, 1973, and an evaluation of their economic and environmental impacts are presented. Report covers asbestos pollution related to manufacturing, demolition and renovation, fabrication and disposal of wastes, and mercury emissions from sludge incineration and drying facilities. Optional air cleaning methods for compliance with asbestos standards, chemical stabilization of waste disposal sites, and estimation of allowable mercury emissions from sewage sludge incineration facilities are discussed.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
1521	SINGLE-FAMILY HOUSING CONSTRUCTION
1522	RESIDENTIAL CONSTRUCTION, NEC
153	OPERATIVE BUILDERS
1531	OPERATIVE BUILDERS
154	NONRESIDENTIAL BUILDING CONSTRUCTION
1541	INDUSTRIAL BUILDINGS AND WAREHOUSES
1542	NONRESIDENTIAL CONSTRUCTION, NEC
1542	NONRESIDENTIAL CONSTRUCTION, NEC
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

PB-237 182/1
Medical and Biologic Effects of Environmental Pollutants: Vanadium
National Academy of Sciences
1974, 123 p., MF A01 (Paper copy not available from NTIS)
ISBN 0-309-02218-5, $ 5.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-62-2	VANADIUM

PB-237 183/9
Medical and Biologic Effects of Environmental Pollutants: Chromium
National Academy of Sciences
1974, 164 p., MF A01 (Paper copy not available from NTIS)
ISBN 0-309-022217-7, $6.50

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7440-47-3	CHROMIUM

PB-237 184/7
Effects of Fluorides in Animals
National Academy of Sciences
1974, 70 p., MF A01 (Paper copy not available from NTIS)
ISBN 0-309-02219-3, $5.75

Abstract: The report reviews and evaluates information on the effects of fluorides to animals, emphasizing the adverse effects of excessive amounts as related to structural and functional responses. Methods for minimizing toxicity are presented, as are recommended avenues for future investigation. Discussed are the sources of fluorides, essentiality and metabolism of fluoride, fluoride toxicosis and factors influencing it, and the tolerance of various animal species. On the basis of experimental data, fluoride tolerances for various species of animals are provided in tabular form. A dental classification chart to aid in diagnoising fluoride toxicosis in animals has been compiled, and several other tables and figures accompany the text.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
16984-48-8	FLUORIDES

PB-237 411
Background Information for Standards of Performance: Electric Submerged Arc Furnaces for Production of Ferroalloys. Volume I: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 163p, EPA-450/2-74-018A, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-237 421
Background Information for Standards of Performance: Coal Preparation Plants, Volume I: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 59p, EPA-450/2-74-021A, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
11	ANTHRACITE MINING
12	BITUMINOUS COAL AND LIGNITE MINING
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3532	MINING MACHINERY

PB-237 606
Background Information for Standards of Performance: Phosphate Fertilizer Industry. Volume 1. Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct. 74, 140p, EPA-450/2-74-019A, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS

PB-237 607
Background Information for Standards of Performance: Phosphate Fertilizer Industry. Volume 2: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 63p, EPA-450/2-74-019B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS

PB-237 612
Background Information for Standards of Performance: Primary Aluminum Industry. Volume I: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 123p, EPA-450/2-74-020A, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
335	NONFERROUS ROLLING AND DRAWING
3351	COPPER ROLLING AND DRAWING
3353	ALUMINUM SHEET, PLATE, AND FOIL
3354	ALUMINUM EXTRUDED PRODUCTS
3355	ALUMINUM ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3361	ALUMINUM FOUNDRIES

PB-237 613
Background Information for Standards of Performance: Primary Aluminum Industry. Volume II: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 123p, EPA-450/2-74-020B, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING
3351	COPPER ROLLING AND DRAWING
3353	ALUMINUM SHEET, PLATE, AND FOIL
3354	ALUMINUM EXTRUDED PRODUCTS
3355	ALUMINUM ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3361	ALUMINUM FOUNDRIES

PB-237 696
Background Information for Standards of Performance: Coal Preparation Plants. Volume 2. Summary and Test Data
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 39p, EPA-450/2-74-021B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
11	ANTHRACITE MINING
12	BITUMINOUS COAL AND LIGNITE MINING
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3532	MINING MACHINERY

PB-237 832

Background Information for New Source Performance Standards: Primary Copper, Zinc, and Lead Smelters. Volume 1: Proposed Standards.
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 612p, EPA-450/2-74-002A, PC A99/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3332	PRIMARY LEAD
3333	PRIMARY ZINC
7439-92-1	LEAD POWDER
7440-50-8	COPPER
7440-66-6	ZINC

PB-237 840

Background Information for Standards for Performance: Electric Arc Furnaces in the Steel Industry, Volume 1: Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 170p, EPA-450/2-74-017A, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-237 841
Background Information for Standards of Performance: Electric Arc Furnaces in the Steel Industry. Volume 2: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 44p, EPA-450/2-74-017B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-238 077
Background Information for Standards of Performance: Electric Submerged Arc Furnaces for Production of Ferroalloys. Volume 2: Test Data Summary
EPA, Research Triangle Park, NC, OAQPS
Oct 74, 60p, EPA-450/2-74-018B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-243 423
Source Assessment: Prioritization of Air Pollution from Industrial Surface Coating Operations
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
T. W. Hughes, et al
Feb 75, 311p, EPA-650/2-75-019A, PC A14/MF A01

Abstract: Industrial surface coating operations, excluding those associated with automobile and architectural painting, are used in the coating of sheet, strip, coil, paper and paperboard, in treating fabrics, and in finishing appliances, machinery and furniture. These coating operations produce hydrocarbon emissions, primarily solvents and resins, and particulate emissions. Background information and technical data were collected and analyzed in this study in order to establish a data base for prioritizing atmospheric emissions from industrial surface coating operations, excluding automobile and architectural painting. This special project was undertaken to provide information on solvent evaporation processes required by the EPA for use in establishing New Source Performance Standards for industrial surface coating operations.

CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
26	PAPER AND ALLIED PRODUCTS
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS

PB-246 692
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Fluoride
National Institute of Occupational Safety and Health
1975, 191 p., PC A10/MF A01
NIOSH PUB No: 76-103, UNAVAIL NIOSH
GPO No: 017-033-00118-9, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
16984-48-8	FLUORIDES

PB-246 693
Criteria for a Recommended Standard: Occupational Exposure to Zinc Oxide
National Institute of Occupational Safety and Health
1975, 87 p., PC A05/MF A01
NIOSH PUB No: 76-104, UNAVAIL NIOSH
GPO No: 017-033-00109-0, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1314-13-2	ZINC OXIDE, FUME

PB-246 694
Criteria for a Recommended Standard: Occpuational Exposure to Sodium Hydroxide
National Institute of Occupational Safety and Health
1975, 93 p., PC A06/MF A01
NIOSH PUB No: 76-105, UNAVAIL NIOSH
GPO No: 017-033-00110-3, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1310-73-2	SODIUM HYDROXIDE

PB-246 695
Criteria for a Recommended Standard: Occupational Exposure to Chloroform
National Institute of Occupational Safety and Health
1974, 130 p., PC A07/MF A01
NIOSH PUB No: 75-114, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
67-66-3	CHLOROFORM

PB-246 699
Criteria for a Recommended Standard: Occupational Exposure to Ammonia
National Institute of Occupational Safety and Health
1976, 107p., PC A06/MF A01
NIOSH PUB No: 74-136, UNAVAIL NIOSH
GPO No: 017-033-00036-1, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7664-41-7	AMMONIA

PB-246 700
Criteria for a Recommended Standard: Occupational Exposure to Benzene
National Institute of Occupational Safety and Health
1974, 137 p., PC A07/MF A01
NIOSH PUB No: 74-137, UNAVAIL NIOSH
GPO No: 017-033-00038-7, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
71-43-2	BENZENE

PB-246 701
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Arsenic
National Institute of Occupational Safety and Health
1975, 141 p., PC A07/MF A01
NIOSH PUB No: 75-149, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB-246 702
Criteria for a Recommended Standard: Occupational Exposure to Xylene
National Institute of Occupational Safety and Health
1975, 101 p., PC A06/MF A01
NIOSH PUB No: 75-168, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1330-20-7	XYLENE

PB-248 595
Criteria for a Recommended Standard: Occupational Exposure to Chromium VI
National Institute of Occupational Safety and Health
1975, 200 p., PC A10/MF A01
NIOSH PUB No: 76-129, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-47-3	CHROMIUM

PB-249 703
Standard Support and Environmental Impact Statement: Emission Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS
Oct 75, 536p, EPA-450/2-75-009A, PC A23/MF A01

Abstract: A national emission standard for vinyl chloride emitted from ethylene dichloride-vinyl chloride and polyvinyl chloride plants is being proposed under the authority of section 112 of the Clear Air Act. Vinyl chloride has been implicated as the causal agent of angiosarcoma and other serious disorders, both carcinogenic and noncarcinogenic, in people with occupational exposure and in animals with experimental exposure to vinyl chloride. Reasonable extrapolations from these findings cause concern that vinyl chloride may cuase or contribute to the same or similar disorders at present ambient air levels. The purpose of the proposed standard is to minimize vinyl chloride emissions from all known process and fugitive emission sources in ethylene dichloride-vinyl chloride and polyvinyl chloride plants to the level attainable with best available control technology. This would have the effect of furthering the protection of public health by minimizing the health risks to the people living in the vicinity of theses plants and to any additional people who are exposed as a result of new construction. This is estimated to have the effect of reducing emissions from a typical ethylene dichloride-vinyl chloride plant by approximately 94 percent and from a typical polyvinyl chloride plant by approximately 95 percent.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
75-01-4	VINYL CHLORIDE

PB-250 424
Criteria for a Recommended Standard: Occupational Exposure to Carbon Tetrachloride
National Institute of Occupational Safety and Health
1975, 155 p., PC A08/MF A01
NIOSH PUB No: 76-133, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
56-23-5	CARBON TETRACHLORIDE

PB-250 667
Background Information for Standards of Performance: Primary Aluminum Industry. Volume 3: Supplemental Information
EPA, Research Triangle Park, NC, OAQPS
Jan 76, 52p, EPA-450/2-74-020C, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ· mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING
3351	COPPER ROLLING AND DRAWING
3353	ALUMINUM SHEET, PLATE, AND FOIL
3354	ALUMINUM EXTRUDED PRODUCTS
3355	ALUMINUM ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3361	ALUMINUM FOUNDRIES

PB-251 618
Background Information for Standards of Performance: Coal Preparation Plants. Volume 3. Supplemental Information
EPA, Research Triangle Park, NC, OAQPS
Jan 76, 62p, EPA-450/2-74-021C, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ· mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
11	ANTHRACITE MINING
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3532	MINING MACHINERY

PB-252 031
Background Information for Standards of Performance: Electric Submerged Arc Furnaces for Production of Ferroalloys. Volume 3: Supplemental Information
EPA, Research Triangle Park, NC, OAQPS
Apr 76, 112p, EPA-450/2-74-018C, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

PB-252 356
Source Assessment: Flat Glass Manufacturing Plants
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. B. Reznik
Mar 76, 152p, EPA-600/2-76-032B, PC A08/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SULFATE	SULFATES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
3211	FLAT GLASS

PB-253 479
Source Assessment: Prioritization of Stationary Air Pollution Sources. Model Description
EPA, Research Triangle Park, N.C., IERL
Monsanto Research Corp.
E. C. Eimutis
Feb 76, 83p, EPA-600/2-76-032A, PC A05/MF A01

Abstract: The report describes a prioritization model for the rank-ordering of stationary air pollution sources. The source types were rank-ordered or prioritized by computing a relative environmental impact factor for each source type. A priority listing was developed for each of four categories: combustion, organic materials, inorganic materials, and open sources. The report also describes both the actual application of the model and the types of calculations that were performed depending upon the degree of input aggregation. The report also gives detailed examples of use, as well as results of sensitivity analyses, showing how the prioritization model responds to input changes.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-253 992
Source Assessment: Fertilizer Mixing Plants
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
G. D. Rawlings, R. B. Reznik,
Mar 76, 196p, EPA-600/2-76-032C, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SALTS	SALTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY
7664-41-7	AMMONIA
7723-14-0	PHOSPHOROUS (YELLOW)
7782-41-4	FLUORINE
7782-50-5	CHLORINE

PB-256 310
Source Assessment: Severity of Stationary Air Pollution Sources - A Simulation Approach
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
E. C. Eimutis, B. J. Holmes, L. B. Mote,
Jul 76, 133p, EPA-600/2-76/032E, PC A07/MF A01

Abstract: The report gives results of a study simulating the establishment of the severity of stationary air pollution sources. The potential environmental impact of an emission source can be determined from the source severity (the ground level concentration contribution of pollutants relative to some potentially hazardous concentration of the same species). The frequency distribution of the severity of well-documented source types can be examined deterministically. A statistical approach is required to simulate the frequency distri- bution of the severity of source types that are complex or involve a large number of emission points in order to ultimately assess such sources. A Monte Carlo simulation technique is described in this report, together with efficient algorithms for fitting the inverse Weibull, gamma, normal, and log-normal cumulative density functions. Significant correlation is demonstrated between deterministic and simulated severity results using coal-fired steam/electric utilities as an example.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-257 975
Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Petroleum Refinery Sulfur Recovery Plants
EPA, Research Triangle Park, NC, OAQPS
Sep 76, 200p, EPA-450/2-76-016A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB-258 007
Standard Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Sep 76, 386p, EPA-450/2-76-014A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information documen.t (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-258 648/5
Sampling of Automobile Interiors for Vinyl Chloride Monomer
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W.H. Hedley, et al.
May 76, 42p, EPA-600/2-76-124, PC A03/MF A01

Abstract: The report gives results of a study to qualitatively identify organic pollutants in the air inside new automobiles. In recent years, concern has developed over the concentration of organic vapors inside new automobiles. A literature search first identified numerous volatilization products from plastics used in the construction of automobile interiors. Charcoal tubes were used to collect air samples in seven test vehicles. Vinyl chloride monomer concentrations of 0.4 to 1.2 ppm were detected in two vehicles. The concentrations in the other five test vehicles during this preliminary study were below the detection limit of 0.05 ppm.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
3711	MOTOR VEHICLES AND CAR BODIES
75-01-4	VINYL CHLORIDE

PB-258 827
Standard Support and Environmental Impact Statement. Volume 2. Promulgated Emission Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS
Sep 76, 135p, EPA-450/2-75-009B, PC A07/MF A01

Abstract: A national emission standard for vinyl chloride emitted from ethylene dichloride-vinyl chloride and polyvinyl chloride plants is being promulgated under the authority of section 112 of the Clear Air Act. Vinyl chloride has been implicated as the causal agent of angiosarcoma and other serious disorders, both carcinogenic and non-carcinogenic, in people with occupational exposure and in animals with experimental exposure to vinyl chloride. Reasonable extrapolations from these findings cause concern that vinyl chloride may cause or contribute to the same or similar disorders at present ambient air levels. The purpose of the standard is minimize vinyl chloride emissions from all known process and fugitive emission sources in ethylene dichloride-vinyl chloride and polyvinyl chloride plants to the level attainable with best available control technology. This would minimize health risks to both the public as well as to people living near these plants. This is estimated to have the effect of reducing emissions from a typical ethylene dichloride-vinyl chloride plant by approximately 94 percent and from a typical polyvinyl chloride plant by approximately 95 percent. This document contains a summary of the public comments on the proposed standard and EPA's responses to them.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
75-01-4	VINYL CHLORIDE

PB-262 002
Source Assessment: Glass Container Manufacturing Plants
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J. R. Schorr
Oct 76, 146p, EPA-600/2-76-269, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SULFATE	SULFATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
3221	GLASS CONTAINERS
7782-49-2	SELENIUM COMPOUNDS, AS SE

PB-264 018
Toxicology and Carcinogenesis Studies of Chloroform
(CAS No. 67-66-3)
NTP, Research Triangle Park, NC
Mar 76, 61p, PC A04/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
67-66-3	CHLOROFORM

PB-264 018/3
Report on Carcinogenesis Bioassay of Chloroform
National Cancer Institute
Mar 76, 61p, DHEW/PUB/NIH-76-1279, PC A04/MF A01

Abstract: USP grade chloroform was bioassayed using both sexes of Osborne-Mendel rats and B6C3F1 mice. Two dose levels were administered by oral savage five times per week for 78 weeks. A decrease in survival rate and weight gain was evident for all treated groups. A significant increase in kidney epithelial tumors was observed in male rats. Highly significant increases in hepatocellular carcinoma were observed in both sexes of mice. Nodular hyperplasia of the liver was observed in many low dose male mice which had not developed hepatocellular carcinoma.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
67-66-3	CHLOROFORM

PB-264 041
Toxicology and Carcinogenesis Studies of Chlordecone
(Kepone) (CAS No. 143-50-0)
NTP, Research Triangle Park, NC
Jan 76, 27p, PC A03/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
143-50-0	KEPONE

PB-264 122
Toxicology and Carcinogenesis Studies of Trichloroethylene
(Without Epichlorohydrin) (CAS No. 79-01-6)
NTP, Research Triangle Park, NC
Feb 76, 215p, NCI/NTP TR-002, PC A10/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
79-01-6	TRICHLOROETHYLENE

PB-264 122/3
Carcinogenesis Bioassay of Trichloroethylene. CAS No. 79-01-6
National Cancer Institute
Feb 76, 215p, NCI-CG-TR-2, PC A10/MF A01

Abstract: Trichloroethylene (TCE) is a halogenated chemical used primarily as a solvent in industrial degreasing operations. Industrial grade TCE was bioassayed using both sexes of Osborne-Mendel rats and B6C3F1 mice. Two dose levels were administered. Animals were exposed to the compound by oral gavage 5 times per week for 78 weeks. A discussion of dose determination (maximum tolerated dose and time weighted average dose) is included. The results of the carcinogenesis test indicate that Trichloroethylene induced a hepatocellular carcinoma response in mice. There was an absence of a similar effect in rats, and reasons for this dissimilarity are discussed.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
79-01-6	TRICHLOROETHYLENE

PB-265 062
Final Guideline Document: Control of Fluoride Emissions from Existing Phosphate Fertilizer Plants
EPA, Research Triangle Park, NC, OAQPS
Mar 77, 277p, EPA-450/2-77-005, PC A13/MF A01

Abstract: The document serves as a text to state agencies in the development of their gaseous fluoride emission regulations from existing phosphate fertilizer plants. Recommended emission units are suggested for five production facilities: wet-processes phosphoric acid, diammonium phosphate, superphosphoric acid, triple superphosphate, granular triple superphosphate production and storage. Information contained within includes data on the phosphate fertilizer industry and control technology, a discussion of the guideline emission limitations and the supporting data, and analyses of the environmental and economic impacts of the guideline limits.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS

PB-265 082
Toxicology and Carcinogenesis Studies of 1,1,1,-Trichloroethane (Methyl Chloroform) (CAS No. 71-55-6)
NTP, Research Triangle Park, NC
Jan 77, 72p, NCI/NTP TR-003, PC A04/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
71-55-6	TRICHLOROETHANE,1,1,1-

PB-265 082/8
Bioassay of 1, 1, 1-Trichloroethane for Possible Carcinogenicity. CAS No. 71-55-6
National Cancer Institute
Jan 77, 72p, NCI-CG-TR-3, PC A04/MF A01

Abstract: A bioassay for the possible carcinogenicity of technical grade 1,1,1-trichloroethane was conducted using Osborne-Mendel rats and B6C3F1 mice. The 1,1,1-trichloroethane was administered orally by gavage in corn oil to 50 animals of each sex and species at two dose levels 5 days per week for 78 weeks. The rats received two doses of 1500 and 750 mg/kg which produced a moderate depression of body weight in the first year of the study. A yellow discoloration of lower abdominal fur, eye and nasal discharge and dyspnea were observed during the second year. Both male and female test animals exhibited early mortality. Surviving animals were killed at 117 weeks of age. In mice, the doses were increased twice and the time-weighted average doses were 5,616 and 2,807 mg/kg. There was a moderate depression of body weight throughout the study in both sexes and survival was significantly decreased. Neoplasms encountered in both the treated and control animals had been seen previously in untreated animals. The neoplasms were not believed to be attributable to 1,1,1-trichloroethane since no relationship was established between the dosage groups, species, sex, type of neoplasm or site of occurrence.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
71-55-6	TRICHLOROETHANE,1,1,1-

PB-265 479
Background Information for an Opacity Standard of Performance for Basic Oxygen Process Furnaces in Iron and Steel Plants
EPA, Research Triangle Park, NC, OAQPS
Mar 77, 66p, EPA-450/2-77-004, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB-266 213
Health Effects of Occupational Lead and Arsenic Exposure: A Symposium
National Institute of Occupational Safety and Health
1976, 356 p., PC A16/MF A01
NIOSH PUB No: 76-134, UNAVAIL NIOSH
GPO No: 017-033-00121-9, $9.00

Abstract: The report contains papers presented at a symposium to consider the impact of lead and arsenic on the workers' health, and to assist in establishing safe levels of these metals. Topics include: sources of lead and arsenic, and monitoring of workplace both environmentally and biologically; toxicology of lead and arsenic; epidemiology of arsenic and lead exposure, long-term effects, and community exposure studies; carcinogenic effects of arsenic; and problems in setting threshold limit values for arsenic.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7439-92-1	LEAD POWDER
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB-266 224
Industrial Process Profiles for Environmental Use: Chapter 5. Basic Petrochemicals Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. B. Parsons, C. M. Thompson, G. E. Wilkins
Jan 77, 155p, EPA-600/2-77-023E, PC A08/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
299	MISC. PETROLEUM AND COAL PRODUCTS
2999	PETROLEUM AND COAL PRODUCTS, NEC

PB-266 225
Industrial Process Profiles for Environmental Use: Chapter 8. Pesticides Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. B. Parsons, F. I. Hones
Jan 77, 240p, EPA-600/2-77-023H, PC A11/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB-266 226
Industrial Process Profiles for Environmental Use: Chapter 24. The Iron and Steel Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. Parsons, V. S. Katari, R. W. Gerstle
Feb 77, 209p, EPA-600/2-77-023X, PC A10/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB-266 230
Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Cyanide and Cyanide Salts
National Institute of Occupational Safety and Health
1976, 204 p., PC A10/MF A01
NIOSH PUB No: 77-108, UNAVAIL NIOSH
GPO No: 017-033-00163-4, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
143-33-9	CYANIDES
151-50-8	POTASSIUM CYANIDE
74-90-8	HYDROGEN CYANIDE

PB-266 274
Industrial Process Profiles for Environmental Use: Chapter 1. Introduction
EPA, Research Triangle Park, NC, IERL
Radian Corp.
T. Parsons, I. A. Jefcoat, P. W. Spaite
Jan 77, 21p, EPA-600/2-77-023A, PC A02/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB-266 367
Criteria for a Recommended Standards: Occupational Exposure to Chlorine
National Institute of Occupational Safety and Health
1977, 167 p., PC A08/MF A01
NIOSH PUB No: 76-170, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7782-50-5 CHLORINE

PB-266 495
Criteria for a Recommended Standard: Occupational Exposure to Phenol
National Institute of Occupational Safety and Health
1976, 179 p., PC A09/MF A01
NIOSH PUB No: 76-196, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
108-95-2 PHENOL

PB-266 583
Criteria for a Recommended Standard: Occupational Exposure to Tetrachloroethylene (Perchloroethylene)
National Institute of Occupational Safety and Health
1976, 157 p., PC A08/MF A01
NIOSH PUB No: 76-185, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
127-18-4 TETRACHLOROETHYLENE

PB-266 797
Source Assessment: Phthalic Anhydride (Air Emissions)
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. W. Serth, T. W. Hughes
Dec 76, 160p, EPA-600/2-76-032D, PC A08/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
85-44-9	PHTHALIC ANHYDRIDE

PB-266 942
Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Lime Manufacturing Plants
EPA, Research Triangle Park, NC, OAQPS
Apr 77, 282p, EPA-450/2-77-077A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB-267 068
Criteria for a Recommended Standard: Occupational Exposure to Acetylene
National Institute of Occupational Safety and Health
1976, 96 p., PC A05/MF A01
NIOSH PUB No: 76-195, UNAVAIL NIOSH
GPO No: 017-033-00175-8, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
74-86-2	ACETYLENE

PB-267 069
Criteria for a Recommended Standard: Occupational Exposure to 1,1,1-Trichloroethane (Methyl Chloroform)
National Institute of Occupational Safety and Health
1976, 191 p., PC A09/MF A01
NIOSH PUB No: 76-184, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
71-55-6	TRICHLOROETHANE,1,1,1-

PB-267 070
Criteria for a Recommended Standard: Occupational Exposure to Malathion
National Institute of Occupational Safety and Health
1976, 196 p., PC A09/MF A01
NIOSH PUB No: 76-205, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
121-75-5	MALATHION

PB-267 071
Criteria for a Recommended Standard: Occupational Exposure to Allyl Chloride
National Institute of Occupational Safety and Health
1976, 99 p., PC A05/MF A01
NIOSH PUB No: 76-204, UNAVAIL NIOSH
GPO No: 017-033-00186-3, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
107-05-1	CHLOROPROPENE,3-

PB-267 514
Criteria for a Recommended Standard: Occupational Exposure to Phosgene
National Institute of Occupational Safety and Health
1976, 140 p., PC A07/MF A01
NIOSH PUB No: 76-137, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-44-5	PHOSGENE

PB-267 610
Standards Support and Environmental Impact Statement Volume I: Proposed Standards of Performance for Lignite-Fired Steam Generators
EPA, Research Triangle Park, NC, OAQPS
Dec 76, 192p, EPA-450/2-76-030A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-270 240
Source Assessment: Agricultural Opening Burning, State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
C. T. Chi, D. L. Zanders
Jul 77, 77p, EPA-600/2-77-107A, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
01	AGRICULTURAL PRODUCTION-CROPS

PB-270 282
Source Assessment: Beef Cattle Feedlots
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. A. Peters, T. R. Blackwood
Jun 77, 114p, EPA-600/2-77-107, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SULFIDE	SULFIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
02	AGRICULTURAL PRODUCTION-LIVESTOCK
021	LIVESTOCK, EXC. DAIRY, POULTRY, ETC.
0211	BEEF CATTLE FEEDLOTS
10101-41-4	GYPSUM
7664-41-7	AMMONIA
7722-64-7	PERMANGANIC ACID

PB-270 550
Source Assessment: Noncriteria Pollutant Emissions
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
E. C. Eimutis, R. P. Quill
Jul 77, 116p, EPA-600/2-77-107E, PC A06/MF A01

Abstract: The report lists stationary sources that emit each of 320 noncriteria pollutants. It also indicates quantities of such emissions. The list was prepared, using a computerized data base established for emissions of air pollutants from approximately 600 stationary source types in the combustion, organic materials, inorganic materials, and open source categories. (A source type is defined as a group of emission sources which have the same process and emission characteristics.)

CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-271 486
Source Assessment: Mechanical Harvesting of Cotton - State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. W. Synder, T. R. Blackwood
Jul 77, 121p, EPA-600/2-77-107D, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0722	CROP HARVESTING

PB-271 697
Source Assessment: Harvesting of Grain - State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. A. Wachter, T. R. Blackwood
Jul 77, 99p, EPA-600/2-77-107F, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0722	CROP HARVESTING
7631-86-9	SILICA

PB-271 967
Toxicology and Carcinogenesis Studies of Heptachlor (CAS No. 76-44-8)
NTP, Research Triangle Park, NC
1977, 110p, NCI/NTP TR-009, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
76-44-8	HEPTACHLOR

PB-271 969
Source Assessment: Acrylonitrile Manufacture (Air Emissions)
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
T. W. Hughes, D. A. Horn
Sep 77, 123p, EPA-600/2-77-107J, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB-271 977
Toxicology and Carcinogenesis Studies of Chlordane (Technical Grade) (CAS No. 12789-03-6)
NTP, Research Triangle Park, NC
1977, 117p, NCI/NTP TR-008, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
12789-03-6	CHLORDANE TECHNICAL MIXTURE

PB-271 984
Source Assessment: Ammonium Nitrate Production
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. J. Search, R. B. Reznik
Sep 77, 80p, EPA-600/2-77-107I, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
7664-41-7	AMMONIA

PB-271 986
Source Assessment: Overview and Prioritization of Emissions from Textile Manufacturing
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. A. Wachter, S. R. Archer, T. R. Blackwood
Sep 77, 142p, EPA-600/2-77-107H, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS

PB-272 422
Standards Support and Environmental Impact Statement Volume 1: Proposed Standards of Performance for Stationary Gas Turbines
EPA, Research Triangle Park, NC, OAQPS
Sep 77, 593p, EPA-450/2-77-017A, PC A25/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-272 597/6
The Status of Indoor Air Pollution Research 1976
EPA, Research Triangle Park, NC., EMSL
Geomet Inc.
E. McFadden, et al
May 77, 502p, EPA-600/4-77-029, PC A22/MF A01

Abstract: Numerous research projects have examined the occurrences of air pollution in outdoor and workplace environments. A smaller, newer body of research as examined air pollution in nonworkplace, indoor environments. A new emphasis on measures to conserve energy in buildings, curbing heat loss through reduced indoor-outdoor air exchange, has encouraged interest in the relation between indoor and outdoor air quality, building energy conservation, and the potentials for adverse health effects from indoor air pollution in nonworkplace environments. A review of this body of research is the subject of this report. The preparation of this report required a comprehensive survey and assessment of the state-of-the-art of indoor air pollution research described in published literature and unpublished ongoing research.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB-272 621
Source Assessment: Defoliation of Cotton, State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. A. Peters, T. R. Blackwood
Jul 77, 134p, EPA-600/2-77-107G, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
01	AGRICULTURAL PRODUCTION-CROPS
013	FIELD CROPS, EXCEPT CASH GRAINS
0131	COTTON
4685-14-7	DIMETHYL-4,4-BIPYRIDINIUM,1,1-
7775-09-9	SODIUM CHLORATE
7778-39-4	ARSENIC ACID, (H3ASO4)
78-48-8	PHOSPHOROTRIDIOIC ACID

PB-272 940
Toxicology and Carcinogenesis Studies of Tetrachloroethylene
(CAS No. 127-18-4)
NTP, Research Triangle Park, NC
Aug 77, 92p, NCI/NTP TR-013, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
127-18-4	TETRACHLOROETHYLENE

PB-272 940/8
Bioassay of Tetrachloroethylene for Possible Carcinogenicity. CAS No. 127-18-4
National Cancer Institute
Aug 77, 92p, NCI-CG-TR-13, PC A05/MF A01

Abstract: A bioassay for the possible carcinogenicity of U.S.P. grade tetrachloroethylene was conducted using Osborne-Mendel rats and B6C3F1 mice. The compound was administered in corn oil by gavage at two concentrations for 78 weeks to groups of 50 animals of each species and sex. Twenty animals of each species and sex were placed on tests as vehicle controls (receiving corn oil only) and 20 animals of each species and sex served as untreated controls. No significant increased incidence of neoplastic lesions was observed in the treated rats but toxicity of the compound was noted in terms of toxic nephropathy. Mortality of rats was dose-related, 50% of the high dose males dying by week 44 and 50% of the high dose females dying by week 66. In male and female mice, there was a statistically significant increase of hepatocellular carcinoma for each dosed group compared to each control group with a highly significant positive association between increased dosage and elevated tumor incidence. Toxic nephropathy was also noted in treated mice. Under the conditions of this study, tetrachloroethylene is a liver carcinogen in B6C3F1 mice of both sexes. The bioassay of Osborne-Mendel rats is considered to be an inadequate test because of early deaths among the treated animals. (Portions of this document are not fully legible).

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
127-18-4	TETRACHLOROETHYLENE

PB-273 065
Toxicology and Carcinogenesis Studies of Chloramben
(CAS No. 133-90-4)
NTP, Research Triangle Park, NC
Sep 77, 93p, NCI/NTP TR-025, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
133-90-4	AMIBEN

PB-273 068
Source Assessment: Carbon Black Manufacture
EPA, Research Triangle Park, N.C., IERL
Monsanto Research Corp.
R. W. Serth, T. W. Hughes
Oct 77, 248p, EPA-600/2-77-107K, PC A11/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1333-86-4	CARBON BLACK
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2895	CARBON BLACK
7783-06-4	HYDROGEN SULFIDE

PB-273 475
Toxicology and Carcinogenesis Studies of Captan
(CAS No. 133-06-2)
NTP, Research Triangle Park, NC
Sep 77, 104p, NCI/NTP TR-015, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
133-06-2	CAPTAN

PB-273 649
Industrial Process Profiles for Environmental Use: Chapter 3. Petroleum Refining Industry
EPA, Research Triangle Park, NC, IERL
Radian Corp.
J. C. Dickerman, et al.
Jan 77, 148p, EPA-600/2-77-023C, PC A07/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
8002-05-9	PETROLEUM DISTILLATES

PB-273 788
Source Assessment: Pressed and Blown Glass Manufacturing Plants
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J. R. Schorr, et al.
Jan 77, 143p, EPA-600/2-77-005, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SULFATE	SULFATES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
16984-48-8	FLUORIDES
32	STONE, CLAY, AND GLASS PRODUCTS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
3221	GLASS CONTAINERS
3229	PRESSED AND BLOWN GLASS, NEC
7782-49-2	SELENIUM COMPOUNDS, AS SE

PB-273 795
Special Occupational Hazard Review and Control Recommendations for Nickel Carbonyl
National Institute of Occupational Safety and Health
1977, 45 p., PC A03/MF A01
NIOSH PUB No: 77-184, UNAVAIL NIOSH
GPO No: 017-033-00228-2, $4.50

Abstract: The known hazards of nickel carbonyl are reviewed and recommendations are made for control measures in occupational environments. Human effects resulting from accidental exposure to nickel carbonyl include pulmonary edema, interstitial pneumonitis, reduced lung capacity, heart disorders, liver enlargement, and in severe exposure cases, death. In animal carcinogenicity studies, rats developed lung tumors from both long term and acute exposure to nickel carbonyl vapor. Human epidemiologic data are insufficient to either confirm or deny a causal relationship between the increased incidence of lung and nasal cancers and nickel carbonyl exposure in nickel refinery workers. The one part per billion nickel carbonyl standard should protect workers from any carcinogenic and other adverse health effects associated with nickel carbonyl exposure. Methods for detecting nickel carbonyl in the air are described.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
13463-39-3	NICKEL CARBONYL
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC

PB-273 801
Criteria for a Recommended Standard: Occupational Exposure to Carbaryl
National Institute of Occupational Safety and Health
1976, 204 p., PC A10/MF A01
NIOSH PUB No: 77-107, UNAVAIL NIOSH
GPO No: 017-033-00196-1, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
63-25-2	CARBARYL

PB-273 802
Criteria for a Recommended Standard: Occupational Exposure to 1,1,2,2-Tetrachloroethane
National Institute of Occupational Safety and Health
1976, 154 p., PC A08/MF A01
NIOSH PUB No: 77-121, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
79-34-5	TETRACHLOROETHANE,1,1,2,2-

PB-273 805
Criteria for a Recommended Standard: Occupational Exposure to Formaldehyde
National Institute of Occupational Safety and Health
1976, 177 p., PC A09/MF A01
NIOSH PUB No: 77-126, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
50-00-0	FORMALDEHYDE

PB-273 806
Criteria for a Recommended Standard: Occupational Exposure to Methyl Alcohol
National Institute of Occupational Safety and Health
1976, 148 p., PC A07/MF A01
NIOSH PUB No: 76-148, UNAVAIL NIOSH
GPO No: 017-033-00191-0, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
67-56-1	METHANOL

PB-273 817
Criteria for a Recommended Standard: Occupational Exposure to Alkanes
National Institute of Occupational Safety and Health
1977, 138 p., PC A07/MF A01
NIOSH PUB No: 77-151, UNAVAIL NIOSH
GPO No: 017-033-00213-4, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB-273 819
Criteria for a Recommended Standard: Occupational Exposure to Benzoyl Peroxide
National Institute of Occupational Safety and Health
1977, 128 p., PC A07/MF A01
NIOSH PUB No: 77-166, UNAVAIL NIOSH
GPO No: 017-033-00221-5, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
94-36-0	BENZOYL PEROXIDE

PB-273 871
Criteria for a Recommended Standard: Occupational Exposure to Acrylamide
National Institute of Occupational Safety and Health
1976, 137 p., PC A04/MF A01
NIOSH PUB No: 77-112, UNAVAIL NIOSH
GPO No: 017-033-00185-5, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
79-06-1	ACRYLAMIDE

PB-273 873
Criteria for a Recommended Standard: Occupational Exposure to Isopropyl Alcohol
National Institute of Occupational Safety and Health
1976, 131 p., PC A07/MF A01
NIOSH PUB No: 76-142, UNAVAIL NIOSH
GPO No: 017-033-00165-1, $6.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
67-63-0	ISOPROPANOL

PB-273 965
Criteria for a Recommended Standard: Occupational Exposure to Asbestos
National Institute of Occupational Safety and Health
1976, 100 p., PC A05/MF A01
NIOSH PUB No: 77-169, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1332-21-4	ASBESTOS

PB-274 085
Final Guideline Document: Control of Sulfuric Acid Mist Emissions from Existing Sulfuric Acid Production Units
EPA, Research Triangle Park, NC, OAQPS
Sep 77 189p, EPA-450/2-77-019, PC A09/MF A01

Abstract: The U. S. Environmental Protection Agency is required under 40 CFR Part 60 to publish a guideline document for development of State emission standards after promulgating any standard of performance limiting emissions of such a designated pollutant--sulfuric acid mist--from new and modified sulfuric acid production units were promulgated on December 23, 1971, including the following information: (1) Emission guidelines and times for compliance; (2) A brief description of the sulfuric acid industry, and the nature and source of acid mist emissions; (3) Information regarding the effects of acid mist on health and welfare; and (4) Assessments of the environmental, economic, and energy impacts of the emission guideline.

CL-ACID	ACIDIC COMPOUNDS
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

PB-274 191
Criteria for a Recommended Standard: Occupational Exposure to Methyl Parathion
National Institute of Occupational Safety and Health
1976, 189 p., PC A09/MF A01
NIOSH PUB No: 77-106, UNAVAIL NIOSH
GPO No: 017-033-00202-9, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
298-00-0	METHYL PARATHION

PB-274 192
Criteria for a Recommended Standard: Occupational Exposure to Parathion
National Institute of Occupational Safety and Health
1976, 102 p., PC A06/MF A01
NIOSH PUB No: 76-190, UNAVAIL NIOSH
GPO No: 017-033-00195-2, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
56-38-2	PARATHION

PB-274 193
A Cross-Sectional Epidemiologic Survey of Vinyl Chloride Workers
National Institute of Occupational Safety and Health
1977, 50 p., PC A03/MF A01
NIOSH PUB No: 77-177, UNAVAIL NIOSH

Abstract: The extent to which vinyl chloride monomer induces clinical detectable abnormalities among workers occupationally exposed was investigated during a cross-sectional medical survey at a chemical plant which has a polyvinyl chloride polymerization operation, a polyvinyl chloride fabrication operation, and a rubber tire production operation. The survey of 433 predominantly white male employees, divided into four vinyl chloride exposure groups (never, light, heavy, former), determined the prevalence of illnesses and abnormalities based on data gathered by interview, medical examination, blood and pulmonary function tests, liver scans, and hand and chest x-rays. Age-adjusted analyses indicated that hepatomegaly, centeral nervous system symptoms, diastolic hypertension and spouses' fetal wastage (the latter two statistically significant) were more prevalent among past or present vinyl chloride exposed workers than among controls. There was no excess of respiratory system problems, acroosteolysis, Raynaud's phenomenon, and chromosome aberrations as compared with industrial worker controls.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
3011	TIRES AND INNER TUBES
75-01-4	VINYL CHLORIDE
9002-86-2	POLYVINYL CHLORIDE LATEX

PB-274 195
Criteria for a Recommended Standard: Occupational Exposure to Fibrous Glass
National Institute of Occupational Safety and Health
1977, 203 p., PC A10/MF A01
NIOSH PUB No: 77-152, AVAIL NIOSH
GPO No: 017-033-00214-2, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB-274 196
Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Sulfide
National Institute of Occupational Safety and Health
1977, 161p., PC A08/MF A01
NIOSH PUB No: 77-158, AVAIL NIOSH
GPO No: 017-033-00217-7, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7783-06-4	HYDROGEN SULFIDE

PB-274 199
Criteria for a Recommended Standard: Occupational Exposure to Carbon Disulfide
National Institute of Occupational Safety and Health
1977, 198 p., PC A09/MF A01
NIOSH PUB No: 77-156, UNAVAIL NIOSH
GPO No: 017-033-00216-9, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-15-0	CARBON DISULFIDE

PB-274 201
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Nickel
National Institute of Occupational Safety and Health
1977, 293 p., PC A13/MF A01
NIOSH PUB No: 77-164, UNAVAIL NIOSH
GPO No: 017-033-00219-3, $8.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-02-0	NICKEL POWDER

PB-274 237
Criteria for a Recommended Standard: Occupational Exposure to Cadmium
National Institute of Occupational Safety and Health
1976, 97 p., PC A05/MF A01
NIOSH PUB No: 76-192, UNAVAIL NIOSH
GPO No: 017-033-00206-1, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-43-9	CADMIUM

PB-274 238
Criteria for a Recommended Standard: Occupational Exposure to Waste Anesthetic Gases and Vapors
National Institute of Occupational Safety and Health
1977, 204 p., PC A10/MF A01
NIOSH PUB No: 77-140, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB-274 367
Source Assessment: Urea Manufacture
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. J. Search, R. B. Reznik
Nov 77, 94p, EPA-600/2-77/107L, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
57-13-6	UREA

PB-274 553/7
Investigation of Diesel-Powered Vehicle Emissions. Part VII
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
K.J. Springer
Feb 77, 407p, EPA-460/3-76-034, PC A18/MF A01

Abstract: Five light duty diesel vehicles and five heavy duty diesel engines were tested over various test cycles for both regulated and unregulated emissions. A Mercedes 220 D, Mercedes 240 D, Mercedes 300 D, Peugeot 2040, and an International Harvester pick-up truck with a Perkins 6-247 engine were the light duty diesel vehicles tested. The heavy duty diesels included a Detroit Diesel 6V-71 city bus engine with two injector designs, a Cummins NTC-290 truck engine operated with and without variable timing, and a Detroit Diesel 8V-71TA truck engine. Emissions measured included HC, CO, NOx, CO2 smoke, aldehydes, exhaust odor, benzo(a)pyrene, sulfate, sulfur dioxide, and particulate mass.

CL-ALDEHYD	ALDEHYDES
CL-PM	PARTICULATE MATTER
CL-SULFATE	SULFATES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
10102-44-0	NITROGEN DIOXIDE
124-38-9	CARBON DIOXIDE
42	TRUCKING AND WAREHOUSING
50-32-8	BENZO(A)PYRENE
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE
7647-01-0	HYDROGEN CHLORIDE

PB-274 727
Criteria for a Recommended Standard: Occupational Exposure to Decomposition Products of Fluorocarbon Polymers
National Institute of Occupational Safety and Health
1977, 123 p., PC A06/MF A01
NIOSH PUB No: 77-193, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB-274 747
Criteria for a Recommended Standard: Occupational Exposure to Boron Trifluoride
National Institute of Occupational Safety and Health
1976, 95p., PC A05/MF A01
NIOSH PUB No: 77-122, AVAIL NIOSH
GPO No: 017-033-00178-2, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7637-07-2	BORON TRIFLUORIDE

PB-274 764
Behavioral and Neurological Effects of Carbon Disulfide
National Institute of Occupational Safety and Health
1976, 168 p., PC A08/MF A01
NIOSH PUB No. 77-128, UNAVAIL NIOSH
GPO No: 017-033-00189-8, $6.50

Abstract: A behavioral/neuorological battery of tests was applied to a sample of workers occupationally exposed to carbon disulfide, together with neurological examination, and medical evaluation. Workers were also given psychometric tests of reaction time, coordination, visual search, short-term memory, and visual acuity. One hundred workers engaged in the manufacture of viscose rayon constituted the carbon disulfide-exposed group. Since ambient air levels of carbon disulfide could not be obtained within the viscose rayon plant, estimates of workers' exposure to carbon disulfide were based on detailed work history interviews with participants and results from an iodine azide test for urine metabolites of carbon disulfide. According to the total neurologic score for assessment of peripheral neuropathy, 13% of the carbon disulfide-exposed workers showed a probable or definite polyneuropathy. After correcting for age effects, neurologic indicators or ulnar nerve damage correlated significantly with indices of carbon disulfide-exposure, as did behavioral tests of reaction time, dexterity, rate of visual search, and perceptual organization.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
22	TEXTILE MILL PRODUCTS
222	WEAVING MILLS, SYNTHETICS
2221	WEAVING MILLS, SYNTHETICS
28	CHEMICALS AND ALLIED PRODUCTS
75-15-0	CARBON DISULFIDE

PB-274 766
Criteria for a Recommended Standard: Occupational Exposure to Organotin Compounds
National Institute of Occupational Safety and Health
1976, 196 p., PC A09/MF A01
NIOSH PUB No: 77-115, UNAVAIL NIOSH
GPO No: 017-033-00203-7, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-31-5	TIN, AS SN

PB-274 777
Criteria for a Recommended Standard: Occupational Exposure to Chloroprene
National Institute of Occupational Safety and Health
1977, 184 p., PC A09/MF A01
NIOSH PUB No: 77-210, UNAVAIL NIOSH
GPO No: 017-033-00239-8, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
126-99-8	CHLOROBUTADIENE,2-,1,3-

PB-274 789
A Study of Methyl Methacrylate Exposures and Employee Health
National Institute of Occupational Safety and Health
1976, 61 p., PC A04/MF A01
NIOSH PUB No: 77-119, UNAVAIL NIOSH
GPO No: 017-033-00170-7, $4.75

Abstract: Ninety-one exposed and forty-three nonexposed workers are evaluated at five plants manufacturing polymethyl methacrylate sheets. Significant acute effects devleoping over the work shift are not detected as measured by symptomatology, blood pressure, and pulse rate. Chronic effects are sought for in past symptomatology, blood pressure, respiratory function testing, hemoglobin and white blood count, urinalysis, and blood chemistry. Data suggest that effects may occur in the higher concentration exposure groups with regard to serum glucose, and blood urea nitrogen, cholesterol, albumin, and total bilirubin values. Also, possible alterations are suggested in skin and nervous system symptomatology, urinalysis findings, and serum triglycerides. Extensive air sampling reveals mean 8-hour time-weighted average exposure by job category ranging from 4 to 49 ppm, for the workers studies, at the individual plants.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
30	RUBBER AND MISC. PLASTICS PRODUCTS
80-62-6	METHYL METHACRYLATE
9011-14-7	POLYMETHYL METHACRYLATE

PB-274 795
Special Occupational Hazard Review With Control Recommendations - Use of Ethylene Oxide as a Sterilant in Medical Facilities
National Institute of Occupational Safety and Health
1977, 68 p., PC A04/MF A01
NIOSH PUB No: 77-200, UNAVAIL NIOSH

Abstract: Based on the results of recent tests for mutagenesis, NIOSH recommends that exposure to ethylene oxide be controlled so that workers are not exposed to a concentration greater than 75 ppm determined during a 15 minute sampling period, as a ceiling occupational exposure limit and in addition, with the provision that the time-weighed average concentration limit of 50 ppm for a workday not be exceeded. Where the use of the compound is to be continued, improved techniques of exhausting the gas from the sterilizer, the aerator and the sterilized items need to be implemented. Included is a summary of airborne ethylene oxide concentrations measured within health care facilities as part of a field survey. NIOSH estimates that there are in excess of 10,000 ehtylene oxide sterilizers used in U.S. health care facilities, and that approximately 75,000 workers are potentially exposed to the gas in those facilities.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-21-8	ETHYLENE OXIDE
80	HEALTH SERVICES
807	MEDICAL AND DENTAL LABORATORIES
8071	MEDICAL LABORATORIES

PB-274 810
Criteria for a Recommended Standard: Occupational Exposure to Dioxane
National Institute of Occupational Safety and Health
1977, 203 p., PC A10/MF A01
NIOSH PUB No: 77-226, UNAVAIL NIOSH
GPO No: 017-033-00254-1, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
123-91-1	DIOXANE,1,4-

PB-275 525
Compilation of Air Pollutant Emission Factors. Third Edition. Parts A and B (including Supplements 1 through 7)
EPA, Research Triangle Park, NC, OAQPS
Aug 77, 511p, AP-42, PC A22/MF A01

Abstract: Emission data obtained from source tests, material balance studies, engineering estimates, etc., have been compiled for use by those responsible for conducting air pollution emission inventories. Emission factors in this document cover most of the common emission categories. Individual AP-42 supplements are available from NTIS, as follows below. In September 1985, an update package to the Third Edition of AP-42 was published and is available from Whittmel H. Joyner, EPA:OAQPS. Future supplements will be available from the U.S. Government Printing Office. For information on the Fourth Edition of AP-42, see GPO Nos. 055-000-00251-7 and 055-000-00252-5.

AP-42 Supplement Number	NTIS Order Number	Price Code	AP-42 Supplement Number	NTIS Order Number	Price Code
8	PB-288 905	A06	12	P882-101213	A09
9	PB-295 614	A06	13	P883-126557	A06
10	PB80-199045	A07	14	P883-250720	A08
11	PB81-170814	A05	15	P884-199744	A05

EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

PB-275 594
Criteria for a Recommended Standard: Occupational Exposure to Tungsten and Cemented Tungsten Carbide
National Institute of Occupational Safety and Health
1977, 182 p., PC A09/MF A01
NIOSH PUB No: 77-227, AVAIL NIOSH
GPO No: 017-033-00268-1, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-33-7 TUNGSTEN AND COMPOUNDS, AS W

PB-275 666
Toxicology and Carcinogenesis Studies of Aldrin and Dieldin (CAS No. 309-00-2 AND 60-57-1)
NTP, Research Triangle Park, NC
Sep 77, 166p, NCI/NTP TR-021, PC A08/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA HEALTH ASSESSMENT
NTP NATIONAL TOXICOLOGY PROGRAM
TT TOXICITY TESTING
309-00-2 ALDRIN
60-57-1 DIELDRIN

PB-276 471
Toxicology and Carcinogenesis Studies of Picloram (CAS No. 1918-02-1)
NTP, Research Triangle Park, NC
1978, 94p, NCI/NTP TR-023, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA HEALTH ASSESSMENT
NTP NATIONAL TOXICOLOGY PROGRAM
TT TOXICITY TESTING
1918-02-1 PICLORAM

PB-276 485/0
Sampling and Analysis of Coke-Oven Door Emissions
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs.
R.E. Barrett, et al.
Oct 77, 182p, EPA-600/2-77-213, PC A09/MF A01

Abstract: The report gives results of extensive tests of selected fractions of samples of emissions generated by leakage from a coke oven door during a 16-hour coking cycle. The tests included: particulate emissions determination; trace metal analyses; gas analyses; organic analyses by IR spectroscopy, GC-MS, TLC, and HRMS on entire samples or on LC fractions of the samples; and bioassay analyses of bacterial mutagenesis and mammalian cell cytotoxicity. The particulate mass emission determination showed that coke oven emissions can vary considerably from cycle to cycle. The bioassay analyses confirmed that the samples were mutagenic, as implied by the chemical analyses. A sealed hood was fabricated to fit over the coke oven door, so that gases leaking past the door during the coking cycle would be contained and representative samples could be obtained. Additional criteria for the hood included not severely altering the normal door leakage and not interfering with coke oven operation. Initial tests of one hood design suggested modifications which were incorporated into the final design. The final hood was used for conducting two sampling runs at an operating coke oven.

CL-COE	COKE OVEN EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB-276 621
Criteria for a Recommended Standard: Occupational Exposure to Ethylene Dibromide
National Institute of Occupational Safety and Health
1977, 216 p., PC A10/MF A01
NIOSH PUB No: 77-221, AVAIL NIOSH
GPO No: 017-033-00251-7, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
106-93-4	ETHYLENE DIBROMIDE

PB-276 718
Source Assessment: Synthetic Ammonia Production
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
G. D. Rawlings, R. B. Reznik
Nov 77, 85p, EPA-600/2-77-107M, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
7664-41-7	AMMONIA

PB-276 731
Source Assessment: Asphalt Hot Mix
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
Z. S. Khan, T. W. Hughes
Dec 77, 196p, EPA-600/2-77-107N, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ALDEHYD	ALDEHYDES
CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
SA	SOURCE ASSESSMENT
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS

PB-276 745
Methods for Determining the Polychlorinated Biphenyl Emissions from Incineration and Capacitor and Transformer Filling Plants
EPA, Research Triangle Park, NC, EMSL
Midwest Research Inst.
L. Haile, E. Baladi
Nov 77, 94p, EPA-600/4-77-048, PC A05/MF A01

Abstract: Described are methods to measure the polychlorinated biphenyl (PCB) emissions from the stacks of municipal waste, industrial waste, and sewage sludge incinerators and from capacitor and transformer filling plants. The PCB emissions from the incineration plants are collected by impingement in water and adsorption on Florisil. The samples are extracted with hexane, concentrated through evaporation of the solvent, perchlorinated, and the polychlorinated biphenyl content measured as the decachlorinated isomer using a gas chromatograph equipped with a flame ionization detector. The PCB emissions from the capacitor and transformer filling plants are collected directly on Florisil, extracted with hexane and quantified against the appropriate Aroclor using a gas chromatograph. The methods were developed from laboratory studies and field tested at nine incineration plants and two transformer filling plants.

SS	SOURCE SAMPLING
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
1336-36-3	POLYCHLORINATED BIPHENYLS
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
36	ELECTRIC AND ELECTRONIC EQUIPMENT
367	ELECTRONIC COMPONENTS AND ACCESSORIES
3675	ELECTRONIC CAPACITORS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB-276 849
Criteria for a Recommended Standard: Occupational Exposure to Polychlorinated Biphenyls
National Institute of Occupational Safety and Health
1977, 232 p., PC A11/MF A01
NIOSH PUB No: 77-225, AVAIL NIOSH
GPO No: 017-033-00265-7, $7.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB-276 917
Criteria for a Recommended Standard: Occupational Exposure to Coal Tar Products
National Institute of Occupational Safety and Health
1977, 197 p., PC A09/MF A01
NIOSH PUB No: 78-107, AVAIL NIOSH
GPO No: 017-033-00273-8, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
8007-45-2	COAL TAR PITCH VOLATILES

PB-277 333
Criteria for a Recommended Standard: Occupational Exposure to Asphalt Fumes
National Institute of Occupational Safety and Health
1977, 152 p., PC A08/MF A01
NIOSH PUB No: 78-106, UNAVAIL NIOSH
GPO No: 017-033-00272-0, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
8052-42-4	ASPHALT (PETROLEUM) FUMES

PB-277 440
Toxicology and Carcinogenesis Studies of Nitrofen (CAS No. 1836-75-5)
NTP, Research Triangle Park, NC
Sep 77, 94p, NCI/NTP TR-026, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
1836-75-5	NITROFEN

PB-277 453
Toxicology and Carcinogenesis Studies of 1,1,2,2-Tetrachloroethane (CAS No. 79-34-5)
NTP, Research Triangle Park, NC
1978, 90p, NCI/NTP TR-027, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
79-34-5	TETRACHLOROETHANE,1,1,2,2-

PB-277 464/2
Medical and Biologic Effects of Environmental Pollutants: Platinum-Group Metals
National Academy of Sciences
1977, 232 p., PC A07/MF A01
ISBN 0-309-02640-7, $11.25

Abstract: This series, prepared by the National Research Council, assembles and evaluates literature on the subject chemical. Documents discusses chemistry; distribution in the environment; the metabolism; and biological effects of the subject chemical on plants, animals, and man.

CL-METAL	METALLIC COMPOUNDS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
7439-88-5	IRIDIUM
7440-04-2	OSMIUM
7440-05-3	PALLADIUM
7440-06-4	PLATINUM
7440-16-6	RHODIUM METAL, FUME AND DUST, AS RH
7440-18-8	RUTHENIUM

PB-277 472
Toxicology and Carcinogenesis Studies of 1,2-Dibromo-3-Chloropropane (CAS No. 96-12-8)
NTP, Research Triangle Park, NC
Sep 77, 93p, NCI/NTP TR-028, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
96-12-8	DIBROMOCHLOROPROPANE,1,2-,3-

PB-278 135
Draft Guideline Document: Control of TRS Emissions from Existing Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Jan 78, 210p, EPA-450/2-78-003A, PC A10/MF A01

Abstract: Guidelines to aid the states in their preparation of plans for the control of emissions of total reduced sulfur (TRS) from existing kraft pulp mills are being proposed under the authority of section 111(d) of the Clean Air Act. TRS emissions from kraft pulp mills are extremely odorous, and there are numerous instances of poorly controlled mills creating public odor problems. Adoptions of the proposed emission guidelines by the states would result in an overall reduction of about 80 percent in nationwide TRS emissions from kraft pulp mills.

CL-TRS	TOTAL REDUCED SULFUR
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-278 160
Standards Support and Environmental Impact Statement Volume II: Promulgated Standards of Performance for Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Dec 77, 50p, EPA-450/2-76-014B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-278 163
Standards Support and Environmental Impact Statement Volume II: Promulgated Standards of Performance for Petroleum Refinery Sulfur Recovery Plants
EPA, Research Triangle Park, NC, OAQPS
Jan 78, 39p, EPA-450/2-76-016B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB-278 527
Toxicology and Carcinogenesis Studies of Malathion (CAS No. 121-75-5)
NTP, Research Triangle Park, NC
Dec 77, 98p, NCI/NTP TR-024, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
121-75-5	MALATHION

PB-278 610
Toxicology and Carcinogenesis Studies of Trifluralin (CAS No. 1582-09-8)
NTP, Research Triangle Park, NC
Oct 77, 90p, NCI/NTP TR-034, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
1582-09-8	TRIFLURALIN

PB-278 777
Source Assessment: Polychloroprene. State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. A. Horn, D. R. Tierney, T. W. Hughes
Dec 77, 97p, EPA-600/2-77-1070, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
108-88-3	TOLUENE
126-99-8	CHLOROBUTADIENE,2-,1,3-
14807-96-6	TALC
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
7647-01-0	HYDROGEN CHLORIDE

PB-278 816
Destroying Chemical Wastes in Commercial Scale Incinerators
EPA, Washington, DC, OSW
TRW Defense and Space Systems Group
D. Ackerman, et al.
1978, 130p, EPA-530/SW-155C, PC A07/MF A01

Abstract: The report summarizes the results of a Phase II test program demonstrating the effectiveness of thermal destruction of industrial wastes in commercial scale facilities. Phase I was a study effort to select and match suitable wastes and destruction facilities, and to develop a set of detailed facility test plans. Phase II evaluated the environmental, technical, and economic feasibility of thermally destroying fourteen selected industrial wastes in seven different existing commercial scale processing facilities. Results indicated that each of the wastes tested can be thermally destroyed at high efficiencies. Separate detailed reports published for each facility test series conducted and the two volume Phase I report are listed in the references.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
100-42-5	STYRENE
108-95-2	PHENOL
11097-69-1	AROCLOR 1254
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
71-43-2	BENZENE
74-85-1	ETHYLENE
77-47-4	HEXACHLOROCYCLOPENTADIENE
80-62-6	METHYL METHACRYLATE
9002-86-2	POLYVINYL CHLORIDE LATEX
98-95-3	NITROBENZENE

PB-278 866/9
Survey of Indoor Air Quality Health Criteria and Standards
EPA, Research Triangle Park, NC, EMSL
Geomet Inc.
E. McFadden, et al.
Mar 78, 144p, EPA-600/7-78-027, PC A07/MF A01

Abstract: The report is a survey of the state-of-the-art of the scientific studies on indoor air quality criteria and standards. The principal subject is the indoor nonworkplace environment. Indoor air quality standards are classified into three types: (1) maximum allowable air quality standards; (2) design-level standards; and (3) emission standards. Each type may be a guideline, a rule or regulation or standard with force of law. Both American and foreign efforts to issue standards in each of the types are discussed. The existing indoor air pollution standards and the health criteria documents on which they are based are enumerated. The major conclusion reached is that there has been no scientific effort to establish air pollution standards specifically for the indoor nonworkplace environment. (Portions of this document are not fully legible).

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
RR	REGULATIONS OR RULES

PB-279 008

Standards Support and Environmental Impact Statement Volume 2. Promulgated Standards of Performance for Lignite-Fired Steam Generators

EPA, Research Triangle Park, NC, OAQPS

Nov 77, 34p, EPA-450/2-76-030B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environ- mental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
496	STEAM SUPPLY
4961	STEAM SUPPLY

PB-279 171

Source Assessment: Pesticide Manufacturing Air Emissions - Overview and Prioritization

EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
S. R. Archer, W. R. McCurley, G. D. Rawlings

Mar 78, 153p, EPA-600/2-78-004D, PC A08/MF A01

Abstract: This report is an overview of the pesticide manufacturing industry and prioritizes 80 major pesticides based on their potential environmental burden from an air pollution standpoint. Production of synthetic organic pesticides was about 640,000 metric tons in 1974. Thirty-seven major synthetic organic pesticides, those with annual production of 4540 or more tons, accounted for 74% of the market. Elemental chlorine is common to most pesticides, but other raw materials include hydrogen cyanide, carbon disulfide, phosgene, phosphorus pentasulfide, hexachloro-cyclopentadiene, amines, and concentrated acids and caustics. Air pollution aspects of the pesticide manufacturing industry are essentially without quantitative data. For some plants, the pollution caused by loss of active ingredients is less significant than that caused by unreacted by-products. Evaporation from holding ponds and lagoons may also be an emission source, although quantitative data is scarce. Emissions emanate from various equipment units and enter the atmosphere as both the active ingredient and as raw materials, intermediates, and by-prodeucts. Air emission control devices include baghouses, cyclone separators, electrostatic precipitators, incinerators, and gas scrubbers. Estimated production of synthetic organic pesticide in 1985 is 806,000 metric tons.

CL-ACID	ACIDIC COMPOUNDS
CL-AMINE	AMINES
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
CL-SULFIDE	SULFIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
74-90-8	HYDROGEN CYANIDE
75-15-0	CARBON DISULFIDE
75-44-5	PHOSGENE
77-47-4	HEXACHLOROCYCLOPENTADIENE
7782-50-5	CHLORINE

PB-279 305/7
Halocarbons: Environmental Effects of Chlorofluoromethane Release
National Academy of Sciences
1976, 125 p., PC MF A01 (Paper copy not available from NTIS)
ISBN 0-309-02529-X, $5.75

Abstract: The focus of the volume is on the appropriateness of measures that selectively limit the uses of the Freon 11 and Freon 12 chlorofluoromethanes (CFMS) rather than ban their use altogether. It provides a cohesive explanation of various phenomena in the stratosphere, the fates of Freon 11 and Freon 12, and the nature of the control problem regarding these CFMS. The effects on health and nonhuman biological systems are assessed in detail, with special attention given to sun exposure and skin cancer. The effects of CFMS on climate also are considered.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
593-70-4	CHLOROFLUOROMETHANE
75-69-4	FLUOROTRICHLOROMETHANE
75-71-8	DICHLORODIFLUOROMETHANE

PB-279 525
Toxicology and Carcinogenesis Studies of Hexachlorophene
(CAS No. 70-30-4)
NTP, Research Triangle Park, NC
1978, 60p, NCI/NTP TR-040, PC A04/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
70-30-4	HEXACHLOROPHENE

PB-280 024
Source Assessment: Cotton Gins
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
G. D. Rawlings, R. B. Reznik
Jan 78, 82p, EPA-600/2-78-004A, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emisisons from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
01	AGRICULTURAL PRODUCTION-CROPS
013	FIELD CROPS, EXCEPT CASH GRAINS
0131	COTTON
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0724	COTTON GINNING

PB-280 118
Burning Waste Chlorinated Hydrocarbons in a Cement Kiln
EPA, Washington, D.C., OSW
Environmental Protection Service, Montreal
L.D. McDonald, et al.
Jan 78, 221p, EPA-530/SW-147C, PC A10/MF A01

Abstract: An experimental program was carried out in 1975/76 at the St. Lawrence Cement Co., Mississauga, Ontario in which waste chlorinated hydrocarbons, containing up to about 46 weight percent chlorine, were burned in a rotary cement kiln. Materials burned included mixtures of ethylene dichloride, chlorotoluene and up to approximately 50 percent polychlorinated biphenyls (PCB). These materials were destroyed in the cement kiln with at least 99.98 percent efficiency in all cases. Emissions of high molecular weight chlorinated hydrocarbons, dichloromethane, chloroform and carbon tetrachloride, were found in the emissions in the part per billion or lower range. The quantity of precipitator dust requiring disposal, as well as emissions of particulate matter, increased during the test. A reduction in fossil fuels used while burning chlorinated hydrocarbons was noted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
106-43-4	CHLOROTOLUENE,P-
107-06-2	ETHYLENE DICHLORIDE
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC
95-49-8	CHLOROTOLUENE,O-

PB-280 289/0
Kepone/Mirex/Hexachlorocyclopentadiene: An Environmental Assessment
National Academy of Sciences
1978, 73 p., PC A05/MF A01
ISBN 0-309-02766-7, $7.25

Abstract: This report's assessment of the scientific and technical knowledge about the effects of Kepone, Mirex, and Hex as environmental pollutants is based primarily on two literature surveys prepared for EPA's Office of Research and Development by Battelle Columbus Laboratories and the Stanford Research Institute. The principal findings and research needs arising from the Panel's assessment are summarized. Documentation for the findings can be found in the body of the report as noted parenthetically after each finding. The list of research needs identifies areas where more knowledge is needed before a truly comprehensive assessment of the effects of Kepone, Mirex, and Hex can be made.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
143-50-0	KEPONE
2385-85-5	MIREX
77-47-4	HEXACHLOROCYCLOPENTADIENE

PB-280 374/0
Organic Emissions From Automobile Interiors
EPA, Research Triangle Park, NC, IERL
Research Triangle Inst.
R.A. Zweideinger
Dec 77, 90p, EPA-600/7-77-149, PC A05/MF A01

Abstract: The report gives results of an evaluation of six subcompact automobiles for the emission of vinyl chloride monomer (VCM) and other organics into the passenger compartment. Evaluated were a Ford Pinto, AMC Gremlin, GMC Vega, GMC Chevette, NMC Datsun 710, and VW Rabbit. VCM was quantified using charcoal cartridges interfaced with gas/liquid chromatography-mass spectrometry in the single-ion detection mode. VCM levels in the Pinto, Gremlin, Vega, and Chevette were less than the 50 ppb detection limit. With improved instrumental parameters, a 2 ppb detection limit was obtained. Under these conditions, VCM was not detected in the Chevette, but was detected in the Rabbit and the Datsun 710. Samples were taken for qualitative gas/liquid chromatography mass spectrometric analysis of each automobile, using Tenax G.C. sorbent. This analysis produced a composite list of 147 organic compounds which were identified in the automobiles and not in the ambient air in the vicinity of the test. Another 36 compounds were tentatively identified.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
3711	MOTOR VEHICLES AND CAR BODIES
75-01-4	VINYL CHLORIDE

PB-280 726
Source Assessment: Rail Tank Car, Tank Truck, and Drum Cleaning, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. E. Earley, K. M. Tackett, T. R. Blackwood
Apr 78, 69p, EPA-600/2-78-004G, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
34	FABRICATED METAL PRODUCTS
341	METAL CANS AND SHIPPING CONTAINERS
3412	METAL BARRELS, DRUMS, AND PAILS
40	RAILROAD TRANSPORTATION
401	RAILROADS
4011	RAILROADS, LINE-HAUL OPERATING

PB-280 756
Source Assessment: Major Barium Chemicals
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
R. B. Reznik, H. D. Troy, Jr.
Mar 78, 154p, EPA-600/2-78-004B, PC A08/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7440-39-3	BARIUM

PB-280 926
Source Assessment: Plastics Processing, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. W. Hughes, R. F. Boland, G. M. Rinaldi
Mar 78, 106p, EPA-600/2-78-004C, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB-280 990
Toxicology and Carcinogenesis Studies of 2,4-Dinitrotoluene (CAS No. 121-14-2)
NTP, Research Triangle Park, NC
1978, 106p, NCI/NTP TR-054, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
121-14-2	DINITROTOLUENE,2,4-

PB-281 306/1
User's Guide for PAL A Guassian-Plume Algorithm for Point, Area, and Line Sources
EPA, Research Triangle Park, NC, ESRL
W. B. Petersen
Feb 78, 163p, EPA-600/4-78-013, PC A08/MF A01

Abstract: PAL is an acronym for this point, area, and line source algorithm. PAL is a method of estimating short-term dispersion using Gaussian-plume steady-state assumptions. The algorithm can be used for estimating concentrations of non-reactive pollutants at 30 receptors for averaging times of from 1 to 24 hours, and for a limted number of point, area, and line sources (30 of each type). Calculations are performed for each hour. The hourly meteorological data required are wind direction, wind speed, stability class, and mixing height. Single values of each of these four parameters are assumed representative for the area modeled. This algorithm is not intended for application to entire urban areas but is intended rather, to assess the impact on air quality, on scales of tens to hundreds of meters, of portions of urban areas such as shopping centers, large parking areas, and airports. Level terrain is assumed.

DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY
45	TRANSPORTATION BY AIR
458	AIR TRANSPORTATION SERVICES
4582	AIRPORTS AND FLYING FIELDS
75	AUTO REPAIR, SERVICES, AND GARAGES
752	AUTOMOBILE PARKING
7523	PARKING LOTS

PB-281 422
Source Assessment: Crushed Limestone, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
P. K. Chalekode, T. R. Blackwood, S. R. Archer
Apr 78, 65p, EPA-600/2-78-004E, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14808-60-7	QUARTZ (SILICA DUST)
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME
60676-86-0	SILICA VITREOUS
7631-86-9	SILICA

PB-281 423
Source Assessment: Rubber Processing, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
C. T. Chi, et al.
Mar 78, 135p, EPA-600/2-78-004J, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-MINDUST	MINERAL DUSTS
CL-RESIN	RESINS
CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
100-42-5	STYRENE
106-99-0	BUTADIENE,1,3-
1314-13-2	ZINC OXIDE, FUME
1333-86-4	CARBON BLACK
30	RUBBER AND MISC. PLASTICS PRODUCTS

PB-281 477
Industrial Process Profiles for Environmental Use: Chapter 4. Carbon Black Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
R. W. Gerstle, et al.
Feb 77, 43p, EPA-600/2-77-023D, PC A03/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1333-86-4	CARBON BLACK
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2895	CARBON BLACK

PB-281 478
Industrial Process Profiles for Environmental Use: Chapter 6. The Industrial Organic Chemicals Industry
EPA, Cincinnati, OH, IERL
Research Triangle Institute
R. Liepins, et al.
Feb 77, 1014p, EPA-600/2-77-023F, PC A99/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB-281 479
Industrial Process Profiles for Environmental Use: Chapter 7. Organic Dyes and Pigments Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
T. R. Steadman, et al.
Feb 77, 362p, EPA-600/2-77-023G, PC A16/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2861	GUM AND WOOD CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
289	MISCELLANEOUS CHEMICAL PRODUCTS
2899	CHEMICAL PREPARATIONS, NEC

PB-281 480
Industrial Process Profiles for Environmental Use: Chapter 9. The Synthetic Rubber Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
J. Parr, T. B. Parsons, N. P. Phillips
Feb 77, 97p, EPA-600/2-77-023I, PC A05/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER

PB-281 481
Industrial Process Profiles for Environmental Use: Chapter 11. The Synthetic Fiber Industry
Radian Corp.
J. L. Parr
Feb 77, 58p, EPA-600/2-77-023K, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2823	CELLULOSIC MAN-MADE FIBERS
2824	ORGANIC FIBERS, NONCELLULOSIC

PB-281 482
Industrial Process Profiles for Environmental Use: Chapter 15. Brine and Evaporite Chemicals Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, et al.
Feb 77, 324p, EPA-600/2-77-023O, PC A14/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC

PB-281 483
Industrial Process Profiles for Environmental Use: Chapter 16. The Fluorocarbon-Hydrogen Fluoride Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
H. E. Doorenbus, T. Parsons
Feb 77, 119p, EPA-600/2-77-023P, PC A06/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
76-13-1	TRICHLOROTRIFLUOROMETHANE,1,1,2-
7664-39-3	HYDROGEN FLUORIDE

PB-281 484
Industrial Process Profiles for Environmental Use: Chapter 17. The Gypsum and Wallboard Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, B. P. Shepherd, T. Parsons
Feb 77, 52p, EPA-600/2-77-023Q, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10101-41-4	GYPSUM
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3275	GYPSUM PRODUCTS

PB-281 485
Industrial Process Profiles for Environmental Use: Chapter 18. The Lime Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
A. C. Doumas, et al.
Feb 77, 57p, EPA-600/2-77-023R, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB-281 486
Industrial Process Profiles for Environmental Use: Chapter 19. The Clay Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
J. T. Reding, et al.
Feb 77, 69p, EPA-600/2-77-023S, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
3251	BRICK AND STRUCTURAL CLAY TILE
329	MISC. NONMETALLIC MINERAL PRODUCTS
3295	MINERALS, GROUND OR TREATED

PB-281 487
Industrial Process Profiles for Environmental Use: Chapter 20. The Mica Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
J. T. Reding, et al.
Feb 77, 40p, EPA-600/2-77-023T, PC A03/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
141	DIMENSION STONE
1411	DIMENSION STONE
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3295	MINERALS, GROUND OR TREATED
3299	NONMETALLIC MINERAL PRODUCTS, NEC

PB-281 488
Industrial Process Profiles for Environmental Use: Chapter 21. The Cement Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, et al.
Feb 77, 52p, EPA-600/2-77-023U, PC A04/MF 101

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2891	ADHESIVES AND SEALANTS
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC
325	STRUCTURAL CLAY PRODUCTS
3255	CLAY REFRACTORIES
329	MISC. NONMETALLIC MINERAL PRODUCTS
3297	NONCLAY REFRACTORIES

PB-281 489
Industrial Process Profiles for Environmental Use: Chapter 22. The Phosphate Rock and Basic Fertilizer Materials Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
P. E. Muehlberg, et al.
Feb 77, 212p, EPA-600/2-77-023V, PC A10/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

CL-PHOSPHA	PHOSPHATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY

PB-281 490
Industrial Process Profiles for Environmental Use: Chapter 23. Sulfur, Sulfur Oxides and Sulfuric Acid
EPA, Cincinnati, OH, IERL
Radian Corp.
R. W. Gerstle, et al.
Feb 77, 75p, EPA-600/2-77-023W, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID
7704-34-9	SULFUR

PB-281 491
Industrial Process Profiles for Environmental Use: Chapter 25. Primary Aluminum Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
T. Parsons
Feb 77, 46p, EPA-600/2-77-023Y, PC A03/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB-281 492
Industrial Process Profiles for Environmental Use: Chapter 26. Titanium Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
V. S. Katari, T. W. Devitt, T. B. Parsons
Feb 77, 67p, EPA-600/2-77-023Z, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING
3356	NONFERROUS ROLLING AND DRAWING, NEC
336	NONFERROUS FOUNDRIES
3369	NONFERROUS FOUNDRIES, NEC
34	FABRICATED METAL PRODUCTS
346	METAL FORGINGS AND STAMPINGS
3463	NONFERROUS FORGINGS
7440-32-6	TITANIUM

PB-281 731
Toxicology and Carcinogenesis Studies of Endosulfan (CAS No. 115-29-7)
NTP, Research Triangle Park, NC
Dec 77, 95p, NCI/NTP TR-062, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
115-29-7	ENDOSULFAN

PB-281 732
Toxicology and Carcinogenesis Studies of Pentachloronitrobenzene (CAS No. 82-68-8)
NTP, Research Triangle Park, NC
Dec 77, 89p, NCI/NTP TR-061, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
82-68-8	PENTACHLORONITROBENZENE

PB-282 311
Toxicology and Carcinogenesis Studies of Chloropicrin (CAS No. 76-06-2)
NTP, Research Triangle Park, NC
1978, 83p, NCI/NTP TR-065, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
76-06-2	CHLOROPICRIN

PB-282 668
Toxicology and Carcinogenesis Studies of Hexachloroethane (CAS No. 67-72-1)
NTP, Research Triangle Park, NC
1978, 90p, NCI/NTP TR-068, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
67-72-1	HEXACHLOROETHANE

PB-282 934
Source Assessment: Reclaiming of Waste Solvents, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. W. Hughes
Apr 78, 69p, EPA-600/2-78-004F, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB-283 051
Development of Information on Pesticides Manufacturing for Source Assessment
EPA, Research Triangle Park, NC, IERL
Midwest Research Institute
G. L. Kelso, et al.
May 78, 416p, EPA-600/2-78-100, PC A18/MF A01

Abstract: The report addresses the selection of relevant factors to gain perspective of the pollution potential from pesticides manufacturing and formulating operations and leads to the evolvement and defense of decision criteria for assessing the need for development of emissions control technology. Pesticides manufacturing and formulating operations are treated as materials input/ output systems, with chemical wastes identified for all media. From about 300 active pesticide ingredients, six candidates (representing five different chemical classifications) were chosen for detailed source assessment. The pesticide industry is characterized and quantified where possible, using available information. Data give a macroeconomic view of the pesticides manufacturing and formulating operations. Government regulatory pressure and posture is identified and assessed. Appendices contain much information on the pesticides industry from several viewpoints.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB-283 345
Toxicology and Carcinogenesis Studies of 1,1-Dichloroethane (CAS No. 75-34-3)
NTP, Research Triangle Park, NC
Dec 77, 93p, NCI/NTP TR-066, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
75-34-3	DICHLOROETHANE,1,1-

PB-283 395
Source Assessment: Polyvinyl Chloride
EPA, Cincinati, OH, IERL
Monsanto Research Corp.
Z. S. Khan, T. W. Hughes
May 78, 107p, EPA-600/2-78-004I, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
75-01-4	VINYL CHLORIDE
9002-86-2	POLYVINYL CHLORIDE LATEX

PB-283 642
Environmental Assessment: At-Sea and Land-Based Incineration of Organochlorine Wastes
EPA, Research Triangle Park, NC, IERL
TRW, Inc.
S.F. Paige, et al.
Apr 78, 116p, EPA-600/2-78-087, PC A06/MF A01

Abstract: The report provides a generalized description of at-sea and land-based incineration of organochlorine wastes and an assessment of their corresponding impacts. The data base for at-sea incineration was obtained during a series of burns, between April 1974 and March 1977. Data describing land-based incineration were obtained from a review of the literature, and a brief survey of companies involved in commercial use and manufacture of incinerators. The report includes: (1) typical organochlorine waste compositions, (2) descriptions of emissions produced during at-sea and land-based incineration, (3) a simulation of corresponding air quality changes, (4) a description of predicted paths of transport of emission constituents, (5) estimates of water quality changes associated with both types of incineration, (6) an assessment of the potential for malfunction which could produce adverse environmental effects, (7) a general discussion of the kinds of environmental impacts associated with the incineration processes, and (8) identification of areas where there are needs for upgrading existing systems and data gaps which limit the comprehensiveness of the analysis.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB-283 661
Standards Support Document: Promulgated Amendments to the National Emission Standard for Asbestos
EPA, Research Triangle Park, NC, OAQPS
Jun 78, 24p, EPA-450/2-77-030, PC A02/MF A01

Abstract: The national emission standard for asbestos is being amended. Scientific information indicates that asbestos exposure can cause cancer and other adverse health effects. The amendments will reduce asbestos emissions by requiring that proper work practices be followed during the renovation and demolition of buildings where friable asbestos materials are present and by prohibiting the spray application of asbestos materials which would be friable after drying. A brief description of the economic and environmental impacts associated with these amendments is included in this document.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
1522	RESIDENTIAL CONSTRUCTION, NEC
153	OPERATIVE BUILDERS
1531	OPERATIVE BUILDERS
154	NONRESIDENTIAL BUILDING CONSTRUCTION
1541	INDUSTRIAL BUILDINGS AND WAREHOUSES
1542	NONRESIDENTIAL CONSTRUCTION, NEC
16	HEAVY CONSTRUCTION CONTRACTORS
162	HEAVY CONSTRUCTION, EXCEPT HIGHWAY
1629	HEAVY CONSTRUCTION, NEC

PB-283 699
Source Assessment: Coal-Fired Residential Combustion Equipment Field Tests, June 1977
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
D. G. DeAngelis, R. B. Reznik
June 78, 97p, EPA-600/2-78-0040, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-284 029
Source Assessment: Crushed Stone
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, P. K. Chalekode, R. A. Wachter
May 78, 94p, EPA-600/2-78-004L, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
142	CRUSHED AND BROKEN STONE
1423	CRUSHED AND BROKEN GRANITE
1429	CRUSHED AND BROKEN STONE, NEC
14808-60-7	QUARTZ (SILICA DUST)
60676-86-0	SILICA VITREOUS
7631-86-9	SILICA

PB-284 203
Assessment of Human Exposures to Atmospheric Benzene
EPA, Research Triangle Park, NC, OAQPS
SRI International
S. J. Mara, S. S. Lee
Jun 78, 213p, EPA-450/3-78-031, PC A10/MF A01

Abstract: The report is one in a series that SRI International is providing on a quick response basis for the U. S. Environmental Protection Agency (EPA). Populations-at-risk to selected pollutants are being quantified for input to other more inclusive studies. The primary objective of this study was to estimate the environmental exposure of the U. S. populationto atmospheric benzene emissions from specific sources. In this estimate it was assumed that individuals residing in the vicinity of benzene sources spend 24 hours of each day in the same locations. To estimate more representative exposures, a second objective was added--to make rough estimates of individuals' total exposures by defining total exposure as the sum of exposures to all benzene sources including those in nonresidential areas, within a designated period.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
5541	GASOLINE SERVICE STATIONS
71-43-2	BENZENE

PB-284 297
Source Assessment: Coal Storage Piles
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, R. A. Wachter
May 78, 98p, EPA-600/2-78-004K, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
1112	ANTHRACITE MINING SERVICES
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
1213	BITUMINOUS & LIGNITE MINING SERVICES

PB-284 378
Monitoring for Polychlorinated Biphenyl Emissions from an Electrolytic Capacitor Disposal Project
EPA, Research Triangle Park, NC, EMSL
E. Rodes, D. Jackson, G. Lewis
May 78, 23p, EPA-600/4-78-025, PC A02/MF A01

Abstract: Three different air sampling methods were used simultaneously to monitor for PCB emissions arising from a pilot disposal project involving electrolytic capacitors. Analytical results indicated that the primary polychlorinated biphenyl material was Aroclor 1242, and that airborne concentrations inside the building housing the grinders exceeded 5mg/cu m. The PCB air concentrations outside the building at a distance of 9m were typically <1.0 microgram/cu m. Measurements made with one low-volume and two high-volume air samples are compared.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB-285 000
Kepone Incineration Test Program
EPA, Cincinnati, Ohio, MERL
Design Partnership
B.A. Bell, F.C. Whitmore
May 78, 148p, EPA-600/2-78-108, PC A07/MF A01

Abstract: The Kepone Incineration Test (KIT) program was undertaken to evaluate incineration as a method of destroying Kepone and Kepone-containing materials and to determine the range of operating variables required for complete destruction. The program was divided into two phases: (a) experiments involving the direct injection of low BTU solutions of Kepone into the afterburner, and (b) experiments involving the coin cineration of sewage sludge and various amounts of Kepone injected into a rotary kiln. Each phase was designed so that succeeding experiments involved longer amounts of Kepone and/or alterations in afterburner temperature and residence time.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
143-50-0	KEPONE
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB-285 210
Source Assessment: Crushed Sandstone, Quartz, and Quartzite, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
P. K. Chalekode, T. R. Blackwood, R. A. Wachter
May 78, 69p, EPA-600/2-78-004W, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
141	DIMENSION STONE
1411	DIMENSION STONE
142	CRUSHED AND BROKEN STONE
1429	CRUSHED AND BROKEN STONE, NEC
149	MISCELLANEOUS NONMETALLIC MINERALS
1499	NONMETALLIC MINERALS, NEC
60676-86-0	SILICA VITREOUS

PB-285 662
Source Assessment: Chemical and Fertilizer Mineral Industry, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood
June 78, 137p, EPA-600/2-78-004P, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1474	POTASH, SODA, AND BORATE MINERALS
1475	PHOSPHATE ROCK
1476	ROCK SALT
1477	SULFUR
1479	CHEMICAL AND FERTILIZER MINING, NEC
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY

PB-285 706/8
The GEOMET Indoor-Outdoor Air Pollution Model
EPA, Research Triangle Park, NC, EMSL
Geomet, Inc.
D.J. Moschandreas
Feb 78, 80p, EPA-600/7-78-106, PC A05/MF A01

Abstract: This report documents the formulation of the GEOMET Indoor-Outdoor Air Pollution (GIOAP) model. The model estimates indoor air pollutant concentrations as a function of outdoor pollutant levels, indoor pollutant generation sources rates, pollutant chemical decay rates, and air exchange rates. Topics discussed include basic principles, model formulation, parameter estimation, model statistical validation, and model sensitivity to perturbations of the input parameters. The numerical estimates obtained from the GIOAP simulations have been validated with observed hourly pollutant concentrations obtained from an 18 month residential air quality sampling program. Statistically the GIOAP model estimations are within 25% of the ideal condition (estimated and observed values coincide) for 85% of the observed values for CO, NO, NO2, NMHC, and CO2. Sensitivity studies on the GIOAP model parameters indicate that errors in the estimation of the initial condition and the volume of the structure dissipate with time. Errors in estimating the air exchange rate, the indoor generation strength, and the indoor chemical decay rate are more significant. Sensitivity coefficients have been formulated for all input parameters.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
10028-15-6	OZONE
10102-44-0	NITROGEN DIOXIDE
124-38-9	CARBON DIOXIDE
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE

PB-285 711
Toxicology and Carcinogenesis Studies of 1,4-Dioxane (CAS No. 123-91-1)
NTP, Research Triangle Park, NC
Mar 78, 110p, NCI/NTP TR-080, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
123-91-1	DIOXANE,1,4-

PB-285 791
Toxicology and Carcinogenesis Studies of Hydrazobenzene (CAS No. 122-66-7)
NTP, Research Triangle Park, NC
May 78, 114p, NCI/NTP TR-092, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
122-66-7	HYDRAZOBENZENE

PB-285 968
Toxicology and Carcinogenesis Studies of 1,2-Dichloroethane (CAS No. 107-06-2)
NTP, Research Triangle Park, NC
Jan 78, 112p, NCI/NTP TR-055, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
107-06-2	ETHYLENE DICHLORIDE

PB-285 968/4
Bioassay of 1,2-Dichloroethane for Possible Carcinogenicity. CAS No. 107-06-2
National Cancer Institute
Jan 78, 112p, NCI-CG-TR-55, PC A06/MF A01

Abstract: A bioassay of technical-grade 1,2-dichloroethane for possible carcinogenicity was conducted using Osborne-Mendel rats and B6C3F1 mice. 1,2-Dichloroethane in corn oil was administered by gavage, at either of two dosages, to groups of 50 male and 50 female animals of each species for 78 weeks. Twenty animals of each sex and species were placed on test as vehicle controls. Twenty animals of each sex and species were used as untreated controls. Squamous-cell carcinomas of the forestomach and hemangiosarcomas of the circulatory system in the male rats and adenocarcinomas of the mammary gland in female rats showed a statistically significant increase. Under the conditions of this study, 1,2-dichloroethane is carcinogenic to Osborne-Mendel rats, causing squamous-cell carcinomas of the forestomach, hemangio- sarcomas, and subcutaneous fibromas in male rats and causing mammary adenocarcinomas in female rats. This compound was also found to be carcinogenic to B6C3F1 mice, causing mammary adenocarcinomas and endometrial tumors in female mice, and causing alveolar/bronchiolar adenomas in mice of both sexes.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-06-2	ETHYLENE DICHLORIDE

PB-286 155
Electric Utility Steam Generating Units: Background Information for Proposed NOx Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 78, 226p, EPA-450/2-78-005A, PC A11/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
10102-44-0	NITROGEN DIOXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-286 159
Utility Steam Generating Units: Background Information for Proposed SO2 Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 78, 107p, EPA-450/2-78-007A-1, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB-286 185
Toxicology and Carcinogenesis Studies of Dioxathion (CAS No. 78-34-2)
NTP, Research Triangle Park, NC
Apr 78, 89p, NCI/NTP TR-125, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
78-34-2	DIOXATHION

PB-286 187
Toxicology and Carcinogenesis Studies of Trichlorofluoromethane (CAS No. 75-69-4)
NTP, Research Triangle Park, NC
Mar 78, 93p, NCI/NTP TR-106, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
75-69-4	FLUOROTRICHLOROMETHANE

PB-286 224
Electric Utility Steam Generating Units - Particulate Matter, Background Information for Proposed Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 78, 182p, EPA-450/2-78-006A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-286 225
Electric Utility Steam Generating Units - Background Information for Proposed SO2 Emission Standards
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
Jul 78, 488p, EPA-450/2-78-007A, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB-286 344
Toxicology and Carcinogenesis Studies of Iodoform
(CAS No. 75-47-8)
NTP, Research Triangle Park, NC
Apr 78, 92p, NCI/NTP TR-110, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
75-47-8	IODOFORM

PB-286 367
Toxicology and Carcinogenesis Studies of Tetrachlorodiphenylethane
(CAS No. 72-54-8)
NTP, Research Triangle Park, NC
May 78, 232p, NCI/NTP TR-131, PC A11/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
72-54-8	RHOTHANE

PB-286 371
Toxicology and Carcinogenesis Studies of Azinphosmethyl
(CAS No. 86-50-0)
NTP, Research Triangle Park, NC
Jan 78, 123p, NCI/NTP TR-069, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
86-50-0	GUSATHION

PB-287 371
Environmental Exposure to Airborne Contaminants in the Nickel Industry, 1976-1977
National Institute of Occupational Safety and Health
1978, 35 p., PC A03/MF A01
NIOSH PUB No: 78-178, UNAVAIL NIOSH

Abstract: The National Institute for Occupational Safety and Health (NIOSH) conducted an industry-wide study of three different nickel processing operations. Since arsenic and crystalline silica were found in the plants surveyed and they have been implicated as either co-carcinogens for development of lung cancer or as causative agents for fibrotic lung disease, exposures to these and other metals as well as nickel were evaluated. Almost all of the environmental concentrations of airborne nickel in the plants met the Occupational Safety and Health Administration (OSHA) standard of 1 mg Ni/cu m. Plant A was also in most cases, well below the current American Conference of Governmental Industrial Hygienists Threshold Limit Values (ACGIH-TLV) recommendations of 0.1 mg Ni/cu m. However, in none of the plants were exposures in the range of the NIOSH recommended standard of 0.015 mg/cu m.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
14808-60-7	QUARTZ (SILICA DUST)
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
7440-02-0	NICKEL POWDER
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB-287 516
Toxicology and Carcinogenesis Studies of Allyl Chloride (CAS No. 107-05-01)
NTP, Research Triangle Park, NC
Dec 77, 99p, NCI/NTP TR-073, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
107-05-1	CHLOROPROPENE,3-

PB-288 161
Source Assessment: Acrylic Acid Manufacture: State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
R. W. Serth, D. R. Tierney, T. W. Hughes
Aug 78, 85p, EPA-600/2-78-004W, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
107-02-8	ACROLEIN
108-95-2	PHENOL
115-07-1	PROPYLENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
64-19-7	ACETIC ACID
67-64-1	ACETONE
71-43-2	BENZENE
75-07-0	ACETALDEHYDE
79-10-7	ACRYLIC ACID

PB-288 210
Source Assessment: Coal Refuse Piles, Abandoned Mines and Outcrops, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
P. K. Chalekode, T. R. Blackwood
Jul 78, 52p, EPA-600/2-78-004V, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
1112	ANTHRACITE MINING SERVICES
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
1213	BITUMINOUS & LIGNITE MINING SERVICES
7664-41-7	AMMONIA
7783-06-4	HYDROGEN SULFIDE

PB-288 428
Toxicology and Carcinogenesis Studies of 1,2-Dibromoethane (Ethylene Dibromide) (CAS No. 106-93-4)
NTP, Research Triangle Park, NC
Mar 78, 116p, NCI/NTP TR-086, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
106-93-4	ETHYLENE DIBROMIDE

PB-288 461
Toxicology and Carcinogenesis Studies of Endrin (CAS No. 72-20-8)
NTP, Research Triangle Park, NC
Aug 78, 109p, NCI/NTP TR-012, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
72-20-8	ENDRIN

PB-288 475
Toxicology and Carcinogenesis Studies of Dibenzo-p-Dioxin (CAS No. 262-12-4)
NTP, Research Triangle Park, NC
Aug 78, 105p, NCI/NTP TR-122, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
262-12-4	DIBENZO-P-DIOXIN

PB-288 475/7
Bioassay of Dibenzo-p-Dioxin for Possible Carcinogenicity
National Cancer Institute
Aug 78, 105p, NCI-CG-TR-122, PC A06/MF A01

Abstract: A bioassay of dibenzo-p-dioxin (UDD) for possible carcinogenicity was conducted by administering the test chemical in feed to Osborne-Mendel rats and B6C3F1 mice. Groups of 35 rats of each sex were administered UDD at one of two doses, either 5,000 or 10,000 ppm, for 110 weeks. Groups of 50 mice of each sex were administered the same doses for 87 or 90 weeks. Controls consisted of groups of 35 untreated rats of each sex and 50 untreated mice of each sex. No tumors were induced in rats or mice of either sex at incidences that were significantly higher in the dosed groups than in the corresponding control groups. It is concluded that under the conditions of this bioassay, UDD was not carcinogenic for Osborne-Mendel rats or B6C3F1 mice.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB-288 497
Source Assessment: Open Mining of Coal, State of the Art
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. J. Rusek, et al.
Sep 78, 90p, EPA-600/2-78-004X, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE
14808-60-7	QUARTZ (SILICA DUST)
60676-86-0	SILICA VITREOUS
74-82-8	METHANE
7631-86-9	SILICA

PB-288 780
Toxicology and Carcinogenesis Studies of Titanium Dioxide
(CAS No. 13463-67-7)
NTP, Research Triangle Park, NC
Apr 78, 110p, NCI/NTP TR-097, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
13463-67-7	TITANIUM DIOXIDE

PB-288 803
Toxicology and Carcinogenesis Studies of Parathion
(CAS No. 56-38-2)
NTP, Research Triangle Park, NC
Aug 78, 104p, NCI/NTP TR-070, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
56-38-2	PARATHION

PB-289 788
Source Assessment: Transport of Sand and Gravel
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, P. K. Chalekode, T. R. Blackwood
Oct 78, 63p, EPA-600/2-78-004Y, PC A04/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
40	RAILROAD TRANSPORTATION
401	RAILROADS
4011	RAILROADS, LINE-HAUL OPERATING
42	TRUCKING AND WAREHOUSING
421	TRUCKING, LOCAL AND LONG DISTANCE
4212	LOCAL TRUCKING, WITHOUT STORAGE
4213	TRUCKING, EXCEPT LOCAL
60676-86-0	SILICA VITREOUS

PB-289 877
A Review of Standards of Performance for New Stationary Sources-Iron and Steel Plants/Basic Oxygen Furnaces
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
M. Drabkin, R. Helfand
Nov 78, 72p, EPA-450/3-78-116, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB-290 125
Source Assessment: Charcoal Manufacturing, State of the Art.
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
C. M. Moscowitz
Dec 78, 90p, EPA-600/2-78-004Z, PC A05/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2861	GUM AND WOOD CHEMICALS

PB-290 570
Toxicology and Carcinogenesis Studies of 2, 7-Dichlorodibenzo-p-Dioxin (CAS No. 33857-26-0)
NTP, Research Triangle Park, NC
Sep 78, 105p, NCI/NTP TR-123, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
33857-26-0	DICHLORODIBENZODIOXIN,2,7-,P-

PB-291 639
Industrial Process Profiles for Environmental Use: Chapter 2. Oil and Gas Production Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
G. E. Wilkins
Feb 77, 112p, EPA-600/2-77-023B, PC A06/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
13	OIL AND GAS EXTRACTION
131	CRUDE PETROLEUM AND NATURAL GAS
1311	CRUDE PETROLEUM AND NATURAL GAS
132	NATURAL GAS LIQUIDS
1321	NATURAL GAS LIQUIDS
138	OIL AND GAS FIELD SERVICES
1381	DRILLING OIL AND GAS WELLS
1382	OIL AND GAS EXPLORATION SERVICES
1389	OIL AND GAS FIELD SERVICES, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
299	MISC. PETROLEUM AND COAL PRODUCTS
2992	LUBRICATING OILS AND GREASES
2999	PETROLEUM AND COAL PRODUCTS, NEC

PB-291 640
Industrial Process Profiles for Environmental Use: Chapter 10. Plastics and Resins Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
G. E. Wilkins
Feb 77, 326p, EPA-600/2-77-023J, PC A15/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

CL-RESIN	RESINS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB-291 641
Industrial Process Profiles for Environmental Use. Chapter 12. The Explosives Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
C. E. Hudak, T. B. Parsons
Feb 77, 122p, EPA-600/2-77-023L, PC A06/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2892	EXPLOSIVES

PB-291 642
Industrial Process Profiles for Environmental Use: Chapter 13, Plasticizers Industry
EPA, Cincinnati, OH, IERL
Radian Corp.
C. M. Thompson
Feb 77, 70p, EPA-600/2-77-023M, PC A04/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atmospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS

PB-291 747
Source Assessment: Noncriteria Pollutant Emissions (1978 Update)
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corporation
E. C. Eimutis, R. P. Quill, G. M. Rinaldi
Jul 78, 152p, EPA-600/2-78-004T, PC A08/MF A01

Abstract: The report lists stationary sources that emit each of 389 noncriteria pollutants. It also indicates quantities of such emissions. The list was prepared using a computerized data base established for emissions of air pollutants from approximately 800 stationary source types in the combustion, organic materials, inorganic materials, and open source categories. (A source type is defined as a group of emission sources which have the same process and emission characteristics).

CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
20	FOOD AND KINDRED PRODUCTS
21	TOBACCO MANUFACTURES
22	TEXTILE MILL PRODUCTS
25	FURNITURE AND FIXTURES
26	PAPER AND ALLIED PRODUCTS
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
30	RUBBER AND MISC. PLASTICS PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY, EXCEPT ELECTRICAL
36	ELECTRIC AND ELECTRONIC EQUIPMENT
37	TRANSPORTATION EQUIPMENT
38	INSTRUMENTS AND RELATED PRODUCTS
39	MISCELLANEOUS MANUFACTURING INDUSTRIES

PB-292 278
A Review of Standards of Performance for New Stationary Sources-Sulfuric Acid Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
M. Drabkin, K. J. Brooks
Jan 79, 90p, EPA-450/3-79-003, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

PB-293 506/2
Survey for Airborne Nitrosamines
National Cancer Institute
1978, 75 p., PC A04/MF A01

Abstract: A survey for airborne volatile nitrosamines was carried out in Los Angeles and Contra Costa Counties and at a rocket fuel plant near Hollister, California. A mobile sampling unit with ambinet aqueous KOH bubblers was used, followed by extraction, concentration, and analysis by gas chromatography with thermal energy analysis detection. The detection is based on decomposition of nitrosamines to NO which gives chemiluminescence upon reacting with ozone. Low levels of dimethyl and diethylnitrosamine were observed sporadically at numerous locations but gave no clear indication of significant point sources. Most samples were below 0.03 micrograms/cu m while the highest reached 1.0 micrograms/cu m. Temporal patterns showed morning and evening maxima and suggested photolysis in midday sun. No relationship between airborne nitrosamine levels by area and incidence of several human cancers is apparent.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB-293 593
Toxicology and Carcinogenesis Studies of 2,4-Diaminotoluene
(CAS No. 95-80-7)
NTP, Research Triangle Park, NC
Nov 78, 124p, NCI/NTP TR-162, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
95-80-7	DIAMINOTOLUENE,2,4-

PB-293 594
Toxicology and Carcinogenesis Studies of Phthalic Anhydride
(CAS No. 85-44-9)
NTP, Research Triangle Park, NC
Jan 79, 106p, NCI/NTP TR-159, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
85-44-9	PHTHALIC ANHYDRIDE

PB-293 594/8
Bioassay of Phthalic Anhydride for Possible Carcinogenicity
National Cancer Institute
Jan 79, 106p, NCI-CG-TR-159, PC A06/MF A01

Abstract: A bioassay of phthalic anhydride for possible carcinogenicity was conducted by administering the test chemical in feed to F344 rats and B6C3F1 mice. Groups of 50 animals of each sex and species were administered the chemical at one of two doses for 105 weeks. The doses for rats were 7,500 or 15,000 ppm. The time weighted average doses for male mice were either 16,346 or 32,692 ppm and for female mice were either 12,019 or 24,038 ppm. Matched controls consisted of 20 untreated animals of each species and sex. No tumors occurred in the rats or mice of either sex at incidences that could be clearly related to the administration of the test chemical. It is concluded that under the conditions of this bioassay, phthalic anhydride was not carcinogenic for F344 rats or B6C3F1 mice of either sex.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
85-44-9	PHTHALIC ANHYDRIDE

PB-293 770
Toxicology and Carcinogenesis Studies of 2,4,6-Trichlorophenol (CAS No. 88-06-2)
NTP, Research Triangle Park, NC
1979, 115p, NCI/NTP TR-155, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
88-06-2	TRICHLOROPHENOL,2,4,6-

PB-293 889
Toxicology and Carcinogenesis Studies of Diazinon (CAS No. 333-41-5)
NTP, Research Triangle Park, NC
1979, 97p, NCI/NTP TR-137, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
333-41-5	DIAZINON

PB-294 938
Primary Aluminum: Draft Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants
EPA, Research Triangle Park, NC, OAQPS
Feb 79, 345p, EPA-450/2-78-049A, PC A15/MF A01

Abstract: This document serves as a text to State agencies in planning for control of fluoride emissions from existing primary aluminum plants. Achievable fluoride capture or removal efficiencies are given for new retrofit hooding and for primary and secondary removal devices, respectively. Methods for deriving capital and annualized costs are illustrated by a few examples. Costs and fluoride emission reductions achieved by actual retrofits are given for ten plants, and the construction scope of work is described in detail for three of these plants. The guidelines are presented as recommended control technologies that will achieve certain average control efficiencies when applied as new retrofits to existing plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB-294 962
A Review of Standards of Performance for New Stationary Sources - Nitric Acid Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp
M. Drabkin
Jan 79, 75p, EPA-450/3-79-013, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS

PB-295 485/7
Emission of Sulfur-Bearing Compounds from Motor Vehicle and Aircraft Engines. A Report to Congress
EPA, Research Triangle Park, NC, ESRL
Biospherics, Inc.
M. Kawecki
Aμg 78, 455p, EPA-500/9-78-028, PC A20/MF A01

Abstract: The report covers (1) a review of emission factors for H_2SO_4, SO_2, sulfate, H_2S, and carbonyl sulfide from motor vehicles, motor vehicle engines and aircraft engines; (2) a review of the known effects on health and welfare of these compounds; (3) the status on technology to control such emissions; and (4) an analysis of the costs of control weighed against the social benefits of such control. Available emission factors for these pollutants were converted to ambient air concentrations by using dispersion and stochastic models. The predicted ambient air concentrations of these pollutants were compared to concentrations of these known to cause adverse health or welfare effects. Results of this comparison suggest that benefits of any control are likely to be small. Except for 3-way catalytic control technology, cost data for fuel desulfurization and vehicle on-board control technology suggest an extremely large economic impact. Consequently, specific controls of sulfur-bearing compounds from mobile sources are not recommended.

CL-INORGAN	INORGANIC COMPOUNDS
CL-SULFATE	SULFATES
CT	CONTROL TECHNOLOGY DOCUMENT
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
45	TRANSPORTATION BY AIR
7446-09-5	SULFUR DIOXIDE
7664-93-9	SULFURIC ACID
7783-06-4	HYDROGEN SULFIDE

PB-295 649
Source Assessment: Residential Combustion of Coal
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
D. G. DeAngelis, R. B. Reznik
Jan 79, 145p, EPA-600/2-79-019A, PC A07/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB-295 891
Toxicology and Carcinogenesis Studies of Methyl Parathion
(CAS No. 298-00-0)
NTP, Research Triangle Park, NC
Oct 78, 112p, NCI/NTP TR-157, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
298-00-0	METHYL PARATHION

PB-295 896
Toxicology and Carcinogenesis Studies of P-Chloroaniline
(CAS No. 106-47-8)
NTP, Research Triangle Park, NC
1979, 97p, NCI/NTP TR-189, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
106-47-8	CHLOROANILINE,P-

PB-296 038
Toxicology and Carcinogenesis Studies of Nitrofen
(CAS No. 1836-75-5)
NTP, Research Triangle Park, NC
Sep 78, 58p, NCI/NTP TR-184, PC A04/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
1836-75-5	NITROFEN

PB-296 135
Kraft Pulping - Control of TRS Emissions from Existing Mills
EPA, Research Triangle Park, NC, OAQPS
Mar 79, 212p, EPA-450/2-78-003B, PC A10/MF A01

Abstract: Guidelines to aid the State in their preparation of plans for the control of emissions of total reduced sulfur (TRS) from existing kraft pulp mills are being published under the authority of Section 111(d) of the Clean Air Act. TRS emissions from kraft pulp mills are extremely odorous, and there are numerous instances of poorly controlled mills creating public odor problems. Adoption of these emission guidelines by the States would result in an overall reduction of about 80 percent in nationwide TRS emissions from kraft pulp mills.

CL-TRS	TOTAL REDUCED SULFUR
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS

PB-296 953
A Review of Standards for New Stationary Sources - Secondary Brass and Bronze Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
E. L. Keitz, K. J. Brooks
Jun 79, 88p, EPA-450/3-79-011, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS

PB-297 122/4
Sources of Emissions of Polychlorinated Biphenyls into the Ambient Atmosphere and Indoor Air
EPA, Research Triangle Park, NC, HERL
E. MacLeod
Mar 79, 81p, EPA-600/4-79-022, PC A05/MF A01

Abstract: Polychlorinated biphenyls (PCB) have been identified in air samples from many parts of the world since 1960s. This study was undertaken to identify and compare different sources of PCB in indoor and outdoor air. Suspected sources that were tested were flourescent light ballasts, landfills, electrical substantions, a transformer manufacturer, and the sites of illegal dumpings. Defective light ballasts emit large quantities of PCB and are an important indoor source. Capacitors in small electrical equipment may also be an important source. In general, indoor air levels of PCB were at least one order of magnitude higher than outdoor levels. The data indicate that the landfills and electrical substations tested are not major sources of PCB. The transformer manufacturer had elevated levels of PCB in the immediate area of the plant but did not contribute greatly to the levels found off the property. The spill sites also had elevated levels of the contaminant in their immediate area, but the levels 50-100 m away were normal for rural areas.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT
1336-36-3	POLYCHLORINATED BIPHENYLS
36	ELECTRIC AND ELECTRONIC EQUIPMENT
361	ELECTRIC DISTRIBUTING EQUIPMENT
3612	TRANSFORMERS
364	ELECTRIC LIGHTING AND WIRING EQUIPMENT
3648	LIGHTING EQUIPMENT, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB-297 507-T
The Circulation of Carcinogens in the Environment
National Cancer Institute
1979, 418 p., $16.00/MF $3.00

Abstract: Contents: A brief outline of the epidemiology of cancer; Occupational cancer; General information on blastomogenic substances; The possibility of determing blastomogenic substances in the environment; Air pollution with blastomogenic substances; Sources of carcinogenic hydrocarbons in the atmosphere and principles of their prevention in man; The pollution of the soil with blastomogenic polycyclic aromatic hydrocarbons; Water pollution with blastomogenic substances; Contamination of food products with blastomogenic substances: Possible blastomogenicity of certain cosmetics and medicines; Hygienic norms for blastomogenic substances.

CL-CARCIN	CARCINOGENS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB-297 769
Special Occupational Hazard Review for Aldrin/Dieldrin
National Institute of Occupational Safety and Health
1978, 174 p., PC A05/MF A01
NIOSH PUB No: 78-201, UNAVAIL NIOSH

Abstract: The review on Aldrin/Dieldrin toxicity and a companion document prepared for DDT serve as comprehensive reports on the three most representative compounds of the organochlorine class of insecticides. Although Aldrin and Dieldrin are no longer produced in the U.S., they may still have some restricted uses including subsurface ground insertion for termite control, dipping of non-food roots and tops, and mothproofing by using closed-system manufacturing processes. Though the use of Aldrin and Dieldrin is banned in many countries, they are still manufactured in Europe and are used throughout the world for public health purpose. Based on the demonstrated potentials for tumor induction in rats and mice by Aldrin and Dieldrin, NIOSH recommends that workplace environmental limits no higher than 0.15 mg/cum be established for both compounds. The recommended exposure limit is the lowest concentration detectable by the current NIOSH validated sampling and analytical methods (NIOSH Methods S275 and S283). Workers should also avoid skin contact with Aldrin and Dieldrin, as these pesticides can be absorbed through the skin particularly when they are dissolved in organic solvents.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
309-00-2	ALDRIN
60-57-1	DIELDRIN

PB-297 822
Special Hazard Review With Control Recommendations for 4,4' Methylenebis (2-Chloroaniline)
National Institute of Occupational Safety and Health
1978, 75 p., PC A04/MF A01
NIOSH PUB No: 78-188, AVAIL NIOSH

Abstract: This report reviews current toxicity information on 4,4' Methylenebis (2-chloroaniline) and makes control recommendations. 4,4-Methylenebis (2-chloroaniline) has the formula C13H12C12N2. It is commercially important as a curing agent for diisoyanate-based polymers (polyurethanes) and epoxy resin systems. 4,4' Methylenebis(2-chloroani- line) is used to vary the hardness, flexibility, and impact strength of these products. 4,4' Methylenebis(2-chloroaniline) has been manufactured commercially in the U.S. since 1956. Above 200 C, 4,4' Methylenebis(2-chloroaniline), releases irritant and toxic vapors (primarily ortho-chloroaniline). NIOSH estimated through a national survey that in the early 1970's approximately 55,000 U.S. workers were potentially exposed to 4,4' Methylenebis(2-chloroaniline). The majority of these workers were employed in small-to-medium sized establishments where occupational health services may not have been readily available. This review provides an examination of information available in 1973 and a more detailed presentation of recent studies along with recommendations for control of workplace exposures to 4,4-Methylenebis (2-chloroaniline).

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
101-14-4	CURENE
28	CHEMICALS AND ALLIED PRODUCTS

PB-298 427
A Review of Standards of Performance for New Stationary Sources - Asphalt Concrete Plants
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
K. J. Brooks, E. L. Keitz, J. Watson
Jun 79, 152p, EPA-450/3-79-014, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2951	PAVING MIXTURES AND BLOCKS
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3531	CONSTRUCTION MACHINERY

PB-298 510
Electric Utility Steam Generating Units: Background Information for Promulgated Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Jun 79, 341p, EPA-450/3-79-021, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB-298 511
Toxicology and Carcinogenesis Studies of Aldicarb (CAS No. 116-06-3)
NTP, Research Triangle Park, NC
1979, 104p, NCI/NTP TR-136, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
116-06-3	ALDICARB

PB-298 528
Glass Manufacturing Plants, Background Information: Proposed Standards of Performance. Volume I
EPA, Research Triangle Park, NC, OAQPS
Jun 79, 280p, EPA-450/3-79-005A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
3211	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
3221	GLASS CONTAINERS
3229	PRESSED AND BLOWN GLASS, NEC

PB-298 539
Toxicology and Carcinogenesis Studies of Butylated Hydroxytoluene (CAS No. 128-37-0)
NTP, Research Triangle Park, NC
1979, 113p, NCI/NTP TR-150, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
128-37-0	BUTYLATED HYDROXYTOLUENE

PB-300 301
Toxicology and Carcinogenesis Studies of Malathion (CAS No. 121-75-5)
NTP, Research Triangle Park, NC
Jan 79, 74p, NCI/NTP TR-192, PC A04/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
121-75-5	MALATHION

PB-300 480
A Review of Standards of Performance for New Stationary Sources - Petroleum Refineries
EPA, Research Triangle Park, NC, OAQPS
Mitre Corp.
K. Barrett, A. Goldfarb
Jan 79, 91p, EPA-450/3-79-008, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB-300 681
Source Assessment: Phosphate Fertilizer Industry
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. M. Myers, et al.
May 79, 203p, EPA-600/2-79-019C, PC A10/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
2875	FERTILIZERS, MIXING ONLY
7664-41-7	AMMONIA

PB-300 977
Toxicology and Carcinogenesis Studies of Styrene
(CAS No. 100-42-5)
NTP, Research Triangle Park, NC
Jan 79, 99p, NCI/NTP TR-185, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
100-42-5	STYRENE

PB-300 977/6
Bioassay of Styrene for Possible Carcinogenicity
National Cancer Institute
Jan 79, 99p, NCI-CG-TR-185, PC A05/MF A01

Abstract: A bioassay for the possible carcinogenicity of styrene was conducted using Fischer 344 rats and B6C3F1 mice. Styrene was administered by gavage for 78 to 103 weeks to groups of 50 male and 50 female animals of each species. Forty rats of each sex and twenty mice of each sex were placed on test as vehicle controls. The high, medium, and low dosages administered to rats were, respectively, 2000, 1000 and 500 mg/kg. The high and low dosages administered to mice were 300 and 150 mg/kg, respectively. Only in male mice was there a positive association between styrene dosage and the incidences of a combination of adenomas and carcinomas of the lung. Under the conditions of this bioassay, an increased incidence of a combination of adenomas and carcinomas of the lung provided suggestive evidence for the carcinogenicity of styrene in male B6C3F1 mice. However, it is concluded that the bioassay gave no convincing evidence for the carcinogenicity of the compound in Fischer 344 rats or B6C3F1 mice of either sex.

NCI	NATIONAL CANCER INSTITUTE
TT	TOXICITY TESTING
100-42-5	STYRENE

PB80-109804
Regulated and Unregulated Exhaust Emissions from Malfunctioning Three-Way Catalyst Gasoline Automobiles
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
C. M. Urban
Jan 80, 241p, EPA-460/3-80-004, PC A11/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from three-way catalyst-equipped gasoline automobiles operating under malfunction conditions. Three automobiles were evaluated over three driving schedules in the unmodified configuration and in four engine and/or emission control system malfunction configurations. Exhaust emission constituents measured, in addition to the currently regulated emissions, include: particulate, sulfates, aldehydes, sulfieds, amines, metals, and several additional alements and compounds. Additional evaluations, in each of the configurations, involved the measurement of regulated emissions over four short cycle procedures.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-SULFATE	SULFATES
CL-SULFIDE	SULFIDES
CT	CONTROL TECHNOLOGY DOCUMENT
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT

PB80-112089
A Review of Standards of Performance for New Stationary Sources - Portland Cement Industry
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
K. W. Barrett
Oct 78, 83p, EPA-450/3-79-012, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC

PB80-115223
Current Intelligence Bulletin Reprints - Bulletins 18 Thru 30 for 1978
National Institute of Occupational Safety and Health
1979, 156 p., PC A08/MF A01
NIOSH PUB No: 79-146, UNAVAIL NIOSH

Abstract: In January 1975, the National Institute for Occupational Safety and Health (NIOSH) developed a Current Intelligence System. Through this system, persons concerned with occupational health are informed of health and safety hazards that have gone unrecognized or are greater hazards than generally known. Since the inception of the NIOSH Current Intelligence System, over 30 Current Intelligence Bulletins have been issued as part of the information dissemination process. The 1978 Bulletins have been reprinted in this publication. It is important to note that the Bulletins have been reprinted essentially as originally published and do not contain information that may have become available since the date of the publication. Also, for some of the substances, NIOSH may have since issued Criteria Documents with recommended occupational health standards. Contents: 2,4-Diaminoanisole in hair and fur dyes; Tetrachloroethylene (Perchloroethylene); Trimellitic anhydride (TMA); Ethylene thiourea (ETU); Ethylene dibromide and disulfiram toxic interaction; Direct black 38, direct blue 6, and direct brown 95 benzidine derived dyes; Ethylene dichloride (1,2-dichloroethane); NIAX catalyst ESN; Chloroethanes - review of toxicity; Vinyl halides - carcinogenicity; Glycidyl ethers; and Epichlorohydrin.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
106-89-8	EPICHLOROHYDRIN
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
127-18-4	TETRACHLOROETHYLENE
16071-86-6	DIRECT BROWN 95
1937-37-7	DIRECT BLACK 38
2602-46-2	DIRECT BLUE 6
552-30-7	TRIMELLITIC ANHYDRIDE
615-05-4	ANISOLE,2,4-DIAMINO
75-00-3	CHLOROETHANE
96-45-7	ETHYLENE THIOUREA
97-77-8	TETRAETHYLTHIURAM DISULFIDE

PB80-121551
Characterization of Sulfates, Odor, Smoke, POM and Particulates from Light and Heavy Duty Engines - Part IX
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
K.V. Springer
Jun 79, 533p, EPA-460/3-79-007, PC A23/MF A01

Abstract: This report expands EPA's data base on regulated and unregulated emissions from diesel powered cars and trucks. To the extent possible, comparisons were made to similar vehicles powered by gasoline fueled engines. Emissions, fuel economy and general performance of a pair of gasoline- and diesel-powered Volkswagen Rabbit and Oldsmobile Cutlass cars are discussed. Characterization of heavy-duty engines included a Mack ETAY(B)673A and a Caterpillar 3208, both Diesels, and a Chevrolet 366 gasoline fueled engine. A pair of Daimler-Benz Diesels, one turbocharged and the other not, were used to evaluate the effect of turbocharging. A high pressure injection system was tried with the Mack engine and compared to the standard system. A Caterpillar 3406 Diesel was used to investigate the effect of injection timing, combustion system and exhaust gas recirculation on exhaust particulate and other emissions.

CL-ALDEHYD	ALDEHYDES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-SULFATE	SULFATES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10102-44-0	NITROGEN DIOXIDE
124-38-9	CARBON DIOXIDE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
630-08-0	CARBON MONOXIDE

PB80-123540
Automobile and Light-Duty Truck Surface Coating Operations - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 79, 330p, EPA-450/3-79-030, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
3711	MOTOR VEHICLES AND CAR BODIES

PB80-124787
A Review of Standards of Performance for New Stationary Sources - Incinerators
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
R. M. Helfand
Mar 79, 64p, EPA-450/3-79-009, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB80-125446
A Review of Standards of Performance for New Stationary Sources - Sewage Sludge Incinerators
EPA, Research Triangle Park, N.C., OAQPS
MITRE Corp.
R.M. Helfand
Mar 79, 70p, EPA-450/3-79-010, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-SEWSLUD	SEWAGE SLUDGE
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
343	PLUMBING AND HEATING, EXCEPT ELECTRIC
3433	HEATING EQUIPMENT, EXCEPT ELECTRIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB80-126022
Standard Support and Environmental Impact Statement. Volume II: Promulgated Standards of Performance for Stationary Gas Turbines
EPA, Research Triangle Park, N.C., OAQPS
Sep 79, 64p, EPA-450/2-77-017B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
35	MACHINERY, EXCEPT ELECTRICAL
351	ENGINES AND TURBINES
3511	TURBINES AND TURBINE GENERATOR SETS

PB80-128812
Source Assessment: Solvent Evaporation - Degreasing Operations
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. J. Hoogheem, et al.
Aug 79, 133p, EPA-600/2-79-019F, PC A07/MF 101

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
75-09-2	METHYLENE CHLORIDE

PB80-129166
Residual Monomers in Acrylic and Modacrylic Fibers and Fabrics
EPA, Washington, DC, OTS
Southern Research Inst.
J.M. Finkel, R.N. James, and H.C. Miller
Jul 79, 14p, EPA-560/11-80-003, PC A02/MF A01

Abstract: The report deals with the detection and quantitation of acrylonitrile, vinylidene chloride, and vinyl bromide, which are used as monomers in the production of acrylic and modacrylic fibers. The amounts of monomers evolved from samples of carpets, fibers, and fabrics at 50C and 50% relative humidity were determined by gas chromatography with a flame ionization detector and by direct insertion probe mass spectroscopy. The results of the gas chromatographic studies indicate that detectable amounts of residual acrylonitrile, vinylidene chloride, and vinyl bromide were not released from the carpet, fiber, and fiber samples under the conditions selected for analysis. Direct insertion mass spectrometry indicated that methyl bromide was evolved from all of the fiber samples and from two of the three carpet samples. From the remaining carpet sample, three halogenated compounds--dibromo-dichloroethanol, tetrabromoethanol, and tribromochloroethanol--were identified. Traces of fatty accids were found in all of the samples, and sulfur dioxide was evolved from all of the samples except the fabric sample.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
107-13-1	ACRYLONITRILE
22	TEXTILE MILL PRODUCTS
229	MISCELLANEOUS TEXTILE GOODS
2299	TEXTILE GOODS, NEC
593-60-2	VINYL BROMIDE
75-05-4	VINYLIDENE CHLORIDE

PB80-131485
Source Assessment: Analysis of Uncertainty -- Principles and Applications
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
R. W. Serth, et al.
Aug 78, 181p, EPA-600/2-78-004U, PC A09/MF A01

Abstract: The report provides the results of a study that was conducted to analyze the uncertainties involved in the calculation of the decision parameters used in the Source Assessment Program and to determine the effect of these uncertainties on the decision-making procedure. A general procedure for performing an analysis of uncertainty is developed based on the principles of error propagation and statistical inference. It is shown that this simple and straightforward method represents an approximation to standard statistical techniques. The approximate method is illustrated by application to four problems in the area of environmental control. The general procedure is used to establish guidelines for conducting air emissions studies in the Source Assessment Program. In particular, guidelines are established for precision in field sampling and analytical work, and for setting critical values of decision parameters.

EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB80-133044
Industrial Source Complex (ISC) Dispersion Model User's Guide. Volume I
EPA, Research Triangle Park, NC, OAQPS
Cramer (H.E.) Co., Inc.
J.F. Bowers, J.R. Bjorklund, and C.S. Cheney
Dec 79, 367p, EPA-450/4-79-030, PC A16/MF A01

Abstract: Volume I describes the Industrial Source Complex Dispersion Model and its use. The model updates various EPA dispersion model algorithms and combines them in two computer programs that can be used to assess the air quality impact of emissions from the wide variety of source types associated with an industrial source complex. The ISC Model short-term program ISCST, an updated version of the CRSTER, uses sequential hourly meteorological data to calculate values of average concentration or total dry deposition for time periods of 1,2,3,4,6,8,12 and 24 hours. Additionally, ISCST may be used to calculate "N" is 366 days. The ISC Model long-term computer program ISCLT, a sector-averaged model that updates and combines basic features of the Air Quality Display Model AQDM and the Climatological Dispersion Model CDM, uses STAR summaries to calculate seasonal and/or annual average concentration or total deposition values. The ISC Model programs are written in Fortran IV for the Univac 1110 computer. The two programs may also be used on medium to large IBM or CDC computer systems with little or no modification.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

PB80-133051
Industrial Source Complex (ISC) Dispersion Model User's Guide. Volume II: Appendices A through I
EPA, Research Triangle Park, NC, OAQPS
Cramer (H.E.) Co., Inc.
J.F. Bowers, J.R. Bjorklund, and C.S. Cheney
Dec 79, 470p, EPA-450/4-79-031, PC A20/MF A01

Abstract: Volume II contains the computer source code for the short term and long term Industrial Source Complex Dispersion models. The source code for the Meteorological Preprocessor program is also included. Example input and output test results for each model are included.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

PB80-137912
Organic Solvent Cleaners - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Oct 79, 282p, EPA-450/2-78-045A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
71-55-6	TRICHLOROETHANE,1,1,1-
73	BUSINESS SERVICES
739	MISCELLANEOUS BUSINESS SERVICES
7399	BUSINESS SERVICES, NEC
75-09-2	METHYLENE CHLORIDE
76-13-1	TRICHLOROTRIFLUOROMETHANE,1,1,2-
79-01-6	TRICHLOROETHYLENE

PB80-138209
Source Assessment: Chlorinated Hydrocarbons Manufacture
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
Z. S. Khan, T. W. Hughes
Aug 79, 191p, EPA-600/2-79-019G, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-SOLVENT	SOLVENTS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
106-89-8	EPICHLOROHYDRIN
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM
75-44-5	PHOSGENE
75-56-9	PROPYLENE OXIDE

PB80-140163
Ammonium Sulfate Manufacture - Background Information for Proposed Emission Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 79, 321p, EPA-450/3-79-034A, PC A14/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2873	NITROGENOUS FERTILIZERS
7783-20-2	AMMONIUM SULFATE

PB80-141625
Phosphate Rock Plants - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 79, 381p, EPA-450/3-79-017A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-PHOSPHA	PHOSPHATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
51	WHOLESALE TRADE-NONDURABLE GOODS
519	MISC. NONDURABLE GOODS
5191	FARM SUPPLIES

PB80-146293
Status Assessment of Toxic Chemicals
EPA, Cincinnati, OH, IERL, Monsanto Research Corp.
Dec 79, 570p-in 15 repts, PC E99
Set includes PB80-146301, PB80-146319, PB80-146327, PB80-146335, PB80-146343, PB80-146350, PB80-146368, PB80-146376, PB80-146384, PB80-146392, PB80-146400, PB80-146418, PB80-146426, PB80-146434, and PB80-146442.

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS

PB80-146301
Status Assessment of Toxic Chemicals: Acrylonitrile
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, G. E. Wilkins
Dec 79, 34p, EPA-600/2-79-210A, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB80-146319
Status Assessment of Toxic Chemicals: Arsenic
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, S. R. Archer, T. K. Corwin
Dec 79, 47p, EPA-600/2-79-210B, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB80-146327
Status Assessment of Toxic Chemicals: Asbestos
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood.
Dec 77, 33p, EPA-600/2-79-210C, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
1332-21-4	ASBESTOS
26	PAPER AND ALLIED PRODUCTS
266	BUILDING PAPER AND BOARD MILLS
2661	BUILDING PAPER AND BOARD MILLS
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS

PB80-146335
Status Assessment of Toxic Chemicals: Benzene
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood, L. D. Zeagler
Dec 79, 50p, EPA-600/2-79-210D, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB80-146343
Status Assessment of Toxic Chemicals: Benzidine
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, N. P. Meserole
Dec 79, 31p, EPA-600/2-79-210E, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
92-87-5	BENZIDINE

PB80-146350
Status Assessment of Toxic Chemicals: Cadmium
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, R. D. Wilson
Dec 79, 34p, EPA-600/2-79-210F, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
7440-43-9	CADMIUM

PB80-146368
Status Assessment of Toxic Chemicals: Hexachlorobenzene
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
T. R. Blackwood, T. G. Sipes
Dec 79, 30p, EPA-600/2-79-210G, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
118-74-1	HEXACHLOROBENZENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS

PB80-146376
Status Assessment of Toxic Chemicals: Lead
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, T. M. Briggs
Dec 79, 48p, EPA-600/2-79-210H, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
7439-92-1	LEAD POWDER

PB80-146384
Status Assessment of Toxic Chemicals: Mercury
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, T. M. Briggs
Dec 79, 37p, EPA-600/2-79-210I, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7439-97-6	MERCURY

PB80-146392
Status Assessment of Toxic Chemicals: Phosphates
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood
Dec 79, 34p, EPA-600/2-79-210J, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

CL-PHOSPHA	PHOSPHATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC

PB80-146400
Status Assessment of Toxic Chemicals: Polybrominated Biphenyls
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, C. S. Collins
Dec 79, 33p, EPA-600/2-79-210K, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
59536-65-1	HEXABROMOBIPHENYL, TECHNICAL GRADE

PB80-146418
Status Assessment of Toxic Chemicals: Polynuclear Aromatic Hydrocarbons
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, G. E. Wilkins
Dec 79, 48p, EPA-600/2-79-210L, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES

PB80-146426
Status Assessment of Toxic Chemicals: Trichloroethylene
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J. C. Ochsner, T. R. Blackwood, W. C. Micheletti
Dec 79, 38p, EPA-600/2-79-210M, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
20	FOOD AND KINDRED PRODUCTS
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
79-01-6	TRICHLOROETHYLENE

PB80-146434
Status Assessment of Toxic Chemicals: Tris(2,3-Dibromopropyl) Phosphate
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
S. R. Archer, T. R. Blackwood, P. J. Murin
Dec 79, 27p, EPA-600/2-79-210N, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
126-72-7	DIBROMOPROPYLPHOSPHATE,TRIS,2,3-
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS

PB80-146442
Status Assessment of Toxic Chemicals: Vinylidene Chloride
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D. R. Tierney, T. R. Blackwood, M. R. Piana
Dec 79, 37p, EPA-600/2-79-210O, PC A03/MF A01

Abstract: This document is one of a series entitled Status Assessments of Toxic Chemicals. Each report in the series deals with a different chemical, but all the reports address the same topics and are similar in format. The properties, processes, and uses of the chemical are discussed. Control technologies are evaluated, and data on sources and emissions are presented. Possible health effects of exposure to the chemical are identified. Finally, a history of regulation of the chemical is given, and areas in which information is lacking are identified.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2824	ORGANIC FIBERS, NONCELLULOSIC
75-35-4	DICHLOROETHYLENE,1,1-

PB80-150592
Source Assessment: Manufacture of Acetone and Phenol from Cumene
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
J. L. Delaney, T. W. Hughes
May 79, 200p, EPA-600/2-79-019D, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
108-95-2	PHENOL
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2861	GUM AND WOOD CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
67-64-1	ACETONE

PB80-152812
Benzene Emissions from Maleic Anhydride Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Feb 80, 200p, EPA-450/3-80-001A, PC A09/MF A01

Abstract: A National Emission Standard for the control of benzene emissions from maleic anhydride plants is being proposed under the authority of section 112 of the Clean Air Act. The proposed standard would apply to both new and existing sources. This document contains background information and environmental and economic assessments of the regulatory alternatives considered in developing the proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
108-31-6	MALEIC ANHYDRIDE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

PB80-153885
Assessment of Human Exposures to Atmospheric Cadmium
EPA, Research Triangle Park, NC, OAQPS
Energy and Environmental Analysis, Inc.
R. Coleman, et al.
Jun 79, 138p, EPA-450/5-79-007, PC MF A01

Abstract: The report is one of a series of reports which will be used by EPA in responding to the Congressional mandate under the Clear Air Act Amendments of 1977 to determine whether atmospheric emissions of cadmium pose a threat to public health. The report identifies the population exposed to specified cadmium levels from selected point sources. The sources considered are iron and steel mills, municipal incinerators, primary smelters (zinc, copper, lead, and cadmium), and secondary smelters (copper and zinc). Municipal incinerators are the chief contributors to the total population exposed. Primary zinc and primary copper smelters are estimated to cause the highest concentrations.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES
3322	MALLEABLE IRON FOUNDRIES
3325	STEEL FOUNDRIES, NEC
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3333	PRIMARY ZINC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB80-153935
Primary Aluminum: Guidelines for Control of Fluoride Emissions from Existing Primary Aluminum Plants
EPA, Research Triangle Park, NC, OAQPS
Dec 79, 346p, EPA-450/2-78-049B, PC A15/MF A01

Abstract: This document serves as a text to State agencies in planning for control of fluoride emissions from existing primary aluminum plants. Achievable fluoride capture and removal efficiencies are given for new retrofit hooding and for primary and secondary removal devices, respectively. Methods for deriving capital and annualized costs are illustrated by a few examples. Costs and fluoride emission reductions achieved by actual retrofits are given for ten plants, and the construction scope of work is described in detail for three of these plants. The guidelines are presented as recommended control technologies that will achieve certain average control efficiencies when applied as new retrofits to existing plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
7429-90-5	ALUMINUM

PB80-154065
A Review of Standards of Performance for New Stationary Sources - Secondary Lead Smelters
EPA, Research Triangle Park, NC, OAQPS
MITRE Corp.
J. W. Watson, K. J. Brooks
Mar 79, 131p, EPA-450/3-79-015, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7439-92-1	LEAD POWDER

PB80-154602
Review of Standards of Performance for Electric Arc Furnaces in Steel Industry
EPA, Research Triangle Park, NC, OAQPS
Oct 79, 59p, EPA-450/3-70-033, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES

PB80-164874
Criteria for a Recommended Standard: Occupational Exposures in Coal Gasification Plants
National Institute of Occupational Safety and Health
1978, 206 p., PC A10/MF A01
NIOSH PUB No: 78-191, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
29	PETROLEUM AND COAL PRODUCTS
299	MISC. PETROLEUM AND COAL PRODUCTS
2999	PETROLEUM AND COAL PRODUCTS, NEC

PB80-175862
Environmental Exposure to Airborne Contaminants in the Antimony Industry 1975-1976
National Institute of Occupational Safety and Health
1979, 27 p., PC A03/MF A01
NIOSH PUB No: 79-140, AVAIL NIOSH

Abstract: A study of the antimony production industry in the United States was undertaken by the National Institute for Occupational Safety and Health (NIOSH) since a study by Cunningham and McCallum of Associated Lead Manufacturing, Ltd., disclosed 17 cases of respiratory cancer during the last 10 years among antimony production workers in England. The 1975 NIOSH study involved the monitoring of three major antimony producers, two of which roast. Two imported antimony sulfide ore to produce antimony oxide (Plants B and C), while the other (Plant A), the only producer of antimony metal in the United States, produces antimony oxide by the oxidation of purified antimony metal. A follow-up study on Plant A was made in 1976 to collect breathing zone samples since these were not gathered in the preliminary survey. The three plants showed antimony exposures above the current OSHA standard of 0.5 mg/cu m. The arsenic exposures although below the then current OSHA standard of 0.5 mg/cu m exceeded in most instances the current OSHA standard of 0.010 mg/cu m. Bagging operations appeared to be one of the larger air contamination sources in two of the plants. Controlling airborne antimony to 0.5 mg/cu m may possibly reduce airborne arsenic to the OSHA standard.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
7440-36-0	ANTIMONY
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB80-175870
Criteria for a Recommended Standard: Occupational Exposure to Dinitro-Ortho-Cresol
National Institute of Occupational Safety and Health
1978, 159 p., PC A08/MF A01
NIOSH PUB No: 78-131, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
534-52-1	DINITROCRESOL,4,6-,O-

PB80-176050
Criteria for a Recommended Standard: Occupational Exposure to Furfurl Alcohol
National Institute of Occupational Safety and Health
1979, 72 p., PC A04/MF A01
NIOSH PUB No: 79-133, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
98-00-0	FURFURAL ALCOHOL

PB80-176076
Criteria for a Recommended Standard: Occupational Exposure to Ketones
National Institute of Occupational Safety and Health
1978, 255 p., PC A12/MF A01
NIOSH PUB No: 78-173, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB80-176092
Revised Recommended Standard: Occupational Exposure to Ethylene Dichloride (1,2-Dichloroethane)
National Institute of Occupational Safety and Health
1978, 38 p., PC A03/MF A01
NIOSH PUB No: 78-211, AVAIL NIOSH

Abstract: NIOSH considers the evidence of carcinogenicity of ethylene dichloride reported by the National Cancer Institute to be conslusive in two mammalian species (the rate and the mouse). Since ethylene dichloride causes progressive, malignant disease of various organs in two species of animals, NISOH recommends that ethylene dichloride be considered carcinogenic in man. Therefore, because it is not presently possible to establish an exposure level at which ethylene dichloride may be regarded to be without risk, NIOSH recommends that exposure to ethylene dichloride be kept as low as feasible. The use of ethylene dichloride as a solvent, diluent, or fumigant in open operations should be prohibited. Product substitution should be a paramount consideration, and wherever ethylene dichloride is identified or its presence suspected, it should be replaced by a less harmful substitute.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
107-06-2	ETHYLENE DICHLORIDE

PB80-176993
Criteria for a Recommended Standard: Occupational Exposure to Vinyl Acetate
National Institute of Occupational Safety and Health
1978, 89 p., PC A05/MF A01
NIOSH PUB No: 78-205, AVAIL NIOSH
GPO No: 017-033-00362-9, $5.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
108-05-4	VINYL ACETATE

PB80-177207
Source Assessment: Dry Bottom Industrial Boilers Firing Pulverized Bituminous Coal
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. R. McCurley, et al.
Jun 79, 199p, EPA-600/2-79-019E, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB80-181472
Source Assessment: Prescribed Burning, State of the Art
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
C. T. Chi, et al.
Nov 79, 122p, EPA-600/2-79-019H, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
08	FORESTRY

PB80-187388
Quantitative Analysis of Polynuclear Aromatic Hydrocarbons in Liquid Fuels
EPA, Research Triangle Park, NC, ESRL
Radian Corp.
J.L. Parr
Apr 80, 44p, EPA-600/2-80-069, PC A03/MF A01

Abstract: Polynuclear aromatic hydrocarbons (PNAs), formed in combustion processes with liquid hydrocarbon fuels, contribute to mobile source exhaust emissions. Because correlation between PNA levels in automobile exhaust and pre-existent PNAs in fuel has been demonstrated in previous work, a quantitative analysis of 12 individual polynuclear aromatic hydrocarbons present in various aircraft turbine, diesel, and gasoline test fuels was determined in this project. The PNAs included phenanthrene, anthracene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, triphenylene, benzo(a)pyrene, benzo(e)pyrene, benzo(g,h,i)perylene, coronene and anthanthrene. The fuel samples were analyzed by combined gas chromatography/mass spectrometry (GC-MS) after a preliminary isolation/concentration scheme. Liquid crystal chromatographic columns were employed to resolve isomeric PNAs. The results indicated that anthanthrene and coronene were not detected in any of the samples analyzed.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB80-187446
Regulated and Unregulated Exhaust Emissions from a Malfunctioning Three-Way Catalyst Gasoline Automobile
EPA, Ann Arbor, MI, OMS
Southwest Research Research Inst.
C. M. Urban
Jan 80, 171p, EPA-460/3-80-005, PC A08/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from a current model three-way catalyst-equipped gasoline automobile operating under malfunction conditions. One automobile was evaluated over three driving schedules in the unmodified configuration and in four engine and/or emission control system malfunction configurations. Exhaust emission constituents measured, in addition to the currently regulated emissions, include: particulates, sulfates, aldehydes, sulfides, amines, metals and several additional elements and compounds. Additional evaluations, in each of the configurations, involved the measurement of the regulated emissions over four short test procedures.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-SULFATE	SULFATES
CL-SULFIDE	SULFIDES
CT	CONTROL TECHNOLOGY DOCUMENT
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT

PB80-187545
Environmental Assessment of Iron Casting
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
V.H. Baldwin, Jr.
Jan 80, 171p, EPA-600/2-80-021, PC A08/MF A01

Abstract: Sampling of ductile iron casting in green sand molds with phenolic isocyanate cores and in phenol-formaldehyde bound shell molds did not provide definitive proof that environmentally hazardous organic emissions occur. Both molding systems produced the same type of major emissions, alkyl halides, carboxylic acid derivatives, amines, substituted benzenes, nitrogen heterocyclics, and fused aromatics in quantities that slightly exceed the lowest Minimum Acute Toxicity Effluent (MATE) values for the categories, but probably not for individual compounds. GC-MS analysis revealed the major fused aromatics to be naphthalene compounds. Quantitative analysis of specific PNAs showed no significant level of concern. Inorganic dust emissions are hazardous if uncontrolled because of silicon, chromium, and nickel. The dust is sufficiently high in 12 metals to render it a hazardous waste if collected as a sludge and landfilled, but leachate testing may change that categorization. Relatively high levels of Sr, Ba, Ce, Pr, and Nd in the dust indicate that inoculation smoke should be examined.

CL-AMINE	AMINES
CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES
34	FABRICATED METAL PRODUCTS
7440-02-0	NICKEL POWDER
7440-21-3	SILICON
7440-24-6	STRONTIUM
7440-39-3	BARIUM
7440-46-2	CESIUM
7440-47-3	CHROMIUM

PB80-190473
Regulated and Unregulated Exhaust Emissions from Malfunctioning Non-Catalyst and Oxidation Catalyst Gasoline Automobiles.
EPA, Ann Arbor, MI, OMS
Southwest Research Ins.
C. M. Urban
Jan 80, 308p, EPA-460/3-80-003, PC A14/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from non-catalyst and oxidation catalyst-equipped gasoline automobiles operating under malfunction conditions. One non-catalyst and four catalyst-equipped automobiles operating under malfunction conditions. One non-catalyst and four catalyst-equipped automobiles were evaluated over three driving schedules in the unmodified and in four engine and/or emission control system malfunction configurations. Exhaust emission constituents measured, in addition to the currently regulated emissions, inciude particulates, sulfates, aldehydes, sulfides, amines, metals and several additional elements and compounds.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-SULFATE	SULFATES
CL-SULFIDE	SULFIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB80-192479
Primary Aluminum - Background Information for Promulgated Amendments
EPA, Research Triangle Park, NC, OAQPS
Mar 80, 33p, EPA-450/3-79-026, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
7429-90-5	ALUMINUM

PB80-193352
Occupational Exposure to Talc Containing Asbestos
National Institute of Occupational Safety and Health
1980, 117 p., PC A06/MF A01
NIOSH PUB No: 80-115, AVAIL NIOSH
GPO No: 017-033-00357-2, $5.50

Abstract: The National Institute for Occupational Safety and Health (NIOSH) conducted studies of mortality and morbidity patterns and occupational exposures among talc miners and millers in upper New York. The mortality study was based on 398 white male workers who began employment between January 1, 1947 and December 31, 1959 and whose vital status was determined as of June 30, 1975. Observed cause specific mortality for the cohort as compared with that expected based on U.S. white male mortality rates indicated a significant increase in mortality due to bronchogenic cancer, nonmalignant respiratory disease (excluding influenza and pneumonia) and respiratory tuberculosis. The average latency period for bronchogenic cancer was 20 years.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1332-21-4	ASBESTOS
14	NONMETALLIC MINERALS, EXCEPT FUELS
14807-96-6	TALC
149	MISCELLANEOUS NONMETALLIC MINERALS
1496	TALC, SOAPSTONE, AND PYROPHYLLITE

PB80-194152
Standards Support and Environmental Impact Statement. Volume 1: Proposed Standards of Performance for Grain Elevator Industry
EPA, Research Triangle Park, NC, OAQPS
Jan 77, 348p, EPA-450/2-77-001A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
01	AGRICULTURAL PRODUCTION-CROPS
02	AGRICULTURAL PRODUCTION-LIVESTOCK
07	AGRICULTURAL SERVICES
42	TRUCKING AND WAREHOUSING
422	PUBLIC WAREHOUSING
4221	FARM PRODUCT WAREHOUSING AND STORAGE
51	WHOLESALE TRADE-NONDURABLE GOODS
515	FARM-PRODUCT RAW MATERIALS
5153	GRAIN

PB80-194491
Standards Support (Final) and Environmental Impact Statement. Volume II: Promulgated Standards of Performance for Lime Manufacturing Plants
EPA, Research Triangle Park, NC, OAQPS
Oct 77, 24p, EPA-450/2-77-007B, PC A02/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
14	NONMETALLIC MINERALS, EXCEPT FUELS
142	CRUSHED AND BROKEN STONE
1422	CRUSHED AND BROKEN LIMESTONE
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB80-197361
User's Guide for MPTER, A Multiple Point Gaussian Dispersion Algorithm with Optional Terrain Adjustment
EPA, Research Triangle Park, NC, ESRL
T.E. Pierce and D.B. Turner
Apr 80, 250p, EPA-600/8-80-016, PCA11/MF A01

Abstract: The information presented in this user's guide is directed to air pollution scientists interested in applying air quality simulation models. MPTER is the designation for Multiple Point source algorithm with TERrain adjustments. This algorithm is useful for estimating air quality concentrations of relatively nonreactive pollutants; hourly estimates are made using the Gaussian steady-state model. The algorithm is most applicable for source-receptor distances less than 10 km and for locations with level or rolling terrain where a single wind vector for each hour adequately approximates the flow over the source and receptor sites. Calculations are performed on the hourly meteorological data that the model requires: wind direction, wind speed, temperature, stability class, and mixing height. Emission information required of the point sources are source coordinates, emission rate, physical height stack diameter, stack gas exit velocity, and stack gas temperature. In addition to terrain adjustment, options are available for stack downwash, gradual plume rise, and buoyancy-induced dispersion. All printed output is optionally available so the user can avoid unneeded output volume.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

PB80-198435
Standards Support and Environmental Impact Statement. Volume 2: Promulgated Standards of Performance for Grain Elevator Industry
EPA, Research Triangle Park, NC, OAQPS
Apr 78, 92p, EPA-450/2-77-001B, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMANCE STANDARD
01 AGRICULTURAL PRODUCTION-CROPS
02 AGRICULTURAL PRODUCTION-LIVESTOCK
07 AGRICULTURAL SERVICES
42 TRUCKING AND WAREHOUSING
422 PUBLIC WAREHOUSING
4221 FARM PRODUCT WAREHOUSING AND STORAGE
51 WHOLESALE TRADE-NONDURABLE GOODS
515 FARM-PRODUCT RAW MATERIALS
5153 GRAIN

P880-202997
Electric Arc Furnaces in Ferrous Foundries - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
May 80, 306p, EPA-450/3-80-020A, PC A14/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES

P880-208788
Chemical Hazard Information Profiles (CHIPs)
EPA, Washington, D.C., OPTS
Apr 80, 296p, EPA-560/11-80-011, PC A13/MF A01

Abstract: This collection of 40 Chemical Hazard Information Profile (CHIP) reports was prepared by the Office of Pesticides and Toxic Substances (OPTS) between August 1, 1976, and November 20, 1979. Chemicals are chosen for CHIP preparation on the basis of information indicating potential for adverse health or environmental effects of significant exposure. The CHIP itself is a brief summary of readily available information concerning health and environmental effects and exposure potential of a chemical. Information gathering for a CHIP is generally limited to a search of secondary literature sources and is not intended to be exhaustive; however, in depth searches on specific topics may be done on a case-by-case basis. In general, no attempt is made to evaluate or validate information at this stage of assessment. Preparation of a CHIP is part of the first stage in the OPTS Chemical Risk Assessment Process. The purpose of the CHIP is to enable OPTS to make a tentative decision on an appropriate course of action for the subject chemical and to identify and characterize problems that may require more thorough investigation and evaluation.

CL-ORGANIC	ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS

PB80-209778
Reference Method 24-Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings. Reference Method 25-Determination of Total Gaseous Nonmethane Organic Emissions as Carbon. Background Information for Promulgated Test Methods.
EPA, Research Triangle Park, NC, OAQPS
Jul 80, 22p, EPA-450/3-79-030C, PC A02/MF A01

Abstract: Reference Method 24 is used to determine the volatile organic compound (VOC) content of coating materials, and Reference Method 25 is used to determine the percentage reduction of VOC emissions achieved by emission control devices. These methods were proposed on October 5, 1979, as an appendix to the proposed standards of performance for automobile and light-duty truck surface coating operations. This document contains information on the public comments made after proposal and EPA responses to the comments.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
SS	SOURCE SAMPLING
37	TRANSPORTATION EQUIPMENT

PB80-212111
Asphalt Roofing Manufacturing Industry - Background Information for Proposed Standards.
EPA, Research Triangle Park, NC, OAQPS
Jun 80, 419p, EPA-450/3-80-021A, PC A18/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2952	ASPHALT FELTS AND COATINGS

PB80-217946
Toxicology and Carcinogenesis Studies of Phenol (CAS No. 108-95-2)
NTP, Research Triangle Park, NC
Aug 80, 119p, NCI/NTP TR-203, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
108-95-2	PHENOL

PB80-219421
Environmental Assessment of a Waste-to-Energy Process: Braintree Municipal Incinerator
EPA, Cincinnati, OH, IERL
Midwest Research Institute
M. Golembiewski, et al.
Aug 80, 230p, EPA-600/7-80-149, PC A11/MF A01

Abstract: Midwest Research Institute conducted an array of field tests at the Braintree Municipal Incinerator facility in Braintree, Massachusetts for the purpose of providing data on multimedia emissions to help determine adverse environmental impact and pollution control technology needs. There are two incinerators at the Braintree facility: both are of the waterwall type and are designed to burn unprocessed mixed municipal refuse at a rate of 120 tons/day each. Air pollution control is provided by electrostatic precipitators. Primary emphasis was placed on evaluating air emissions. Analyses were carried out for criteria pollutants as well as for potentially hazardous compounds such as polychlorinated biphenyls and polycyclic aromatic hydrocarbons. The Environmental Protection Agency-designed Source Assessment Sampling System train was also used as per the Environmental Protection Agency's Level 1 environmental assessment protocol. The data obtained were used to evaluate emissions in each effluent stream on the basis of existing standards or criteria and also through the use of the Environmental Protection Agency's recently devised Source Analysis Model (SAM-1A).

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10024-97-2	NITROUS OXIDE
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE

PB80-219678
Sodium Carbonate Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Jun 80, 350p, EPA-450/3-80-029A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
497-19-8	SODIUM CARBONATE

PB80-219686
Benzene Emissions from the Ethylbenzene/Styrene Industry-Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 80, 326p, EPA-450/3-79-035A, PC A15/MF A01

Abstract: A National Emission Standard for the control of benzene emissions from ethylbenzene/styrene plants is being proposed under the authority of Section 112 of the Clear Air act. The proposed standard would apply to both new and existing sources. This document contains background information and environmental and economic assessments of the regulatory alternatives considered in developing the proposed standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

PB80-225717
Industrial Process Profiles for Environmental Use: Chapter 28. Primary Zinc Industry
EPA, Cincinnati, OH, IERL
PEDCo-Environmental Inc.
Jul 80, 89p, EPA-600/2-80-169, PC A05/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3333	PRIMARY ZINC
7440-66-6	ZINC

PB80-227556
User's Guide for HIWAY-2. A Highway Air Pollution Model
EPA, Research Triangle Park, NC, ESRL
W.B. Petersen
May 80, 84p, EPA-600/8-80-18, PC A05/MF A01

Abstract: A computer model, called HIWAY-2, can be used to estimate the concentrations of nonreactive pollutants from highway traffic. This steady-state Gaussian model can be applied to determine air pollution concentrations at receptor locations downwind of 'at-grade' and 'cut section' highways located in relatively uncomplicated terrain. With the exception of receptors directly on the highway or within the cut, the model is applicable for any wind direction, highway orientation, and receptor location. The model was developed for situations where horizontal wind flow occurs. The model cannot consider complex terrain or large obstructions to the flow such as buildings or large trees.

DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
413	INTERCITY HIGHWAY TRANSPORTATION
4131	INTERCITY HIGHWAY TRANSPORTATION

PB80-227572
Texas Episodic Model, User's Guide
EPA, Research Triangle Park, NC, ESRL
Texas Air Control Board
Oct 79, 224p, EPA-DF/80-007C, PC A10/MF A01

Abstract: The Texas Episodic Model Version 8 (TEM8) is a Fortran computer program designed to predict ground level, short-term concentrations of atmospheric pollutants. This model uses a technique, first introduced in the Texas Climatological Model, that requires much less computer time than most short-term models. Predictions are based upon the steady-state Gaussian plume hypothesis, Briggs plume rise formulations, and Pasquill-Guifford dispersion coefficient approximations. The TEM8 is a general purpose model that has many applications. Ground level concentrations for one or two pollutants can be determined for time periods from 10 minutes to 24 hours. TEM8 maintains the assumption that the mass of the plume cross section is conserved for all averaging times. Up to 300 individual point sources and up to 50 area sources may be input to the model.

DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB81-100497
Perchloroethylene Dry Cleaners - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
TRW Environmental Engineering Div.
Aug 80, 171p, EPA-450/3-79-029A, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
127-18-4	TETRACHLOROETHYLENE
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7215	COIN-OPERATED LAUNDRIES AND CLEANING
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB81-100711
Environmental Assessment of a Waste-to-Energy Process: Union Carbide Purox (Trademark) System
EPA, Cincinnati, OH, IERL
Midwest Research Institute
P. Gorman, et al.
Sep 80, 283p, EPA-600/7-80-161, PC A13/MF A01

Abstract: As part of a research program to assess the environmental impacts of various waste-to-energy conversion systems, on-site testing was carried out at Union Carbide Corporation's Purox facility at South Charleston, West Virginia. The Purox system pyrolyzes municipal solid waste, using oxygen, to produce a fuel gas with a heating value of 14.6 MJ/N cu m (370 Btu/scf). Sampling at the facility included four input/output streams (refuse, slag, water, and stack emissions). Water sampling included the pilot scale Unox wastewater treatment system. The boiler stack emissions were sampled when firing the Purox gas and when firing natural gas. Analysis was carried out for most conventional pollutants (CO, NOx, etc.), but included many special analyses (polynuclear aromatic hydrocarbons).

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB81-102204
A Preliminary Evaluation of the Control of Indoor Radon Daughter Levels in New Structures
EPA, Washington, DC, ORP
J.E. Fitzgerald, R.J. Guimond and R.A. Shaw
Nov 76, 88p, EPA-520/4-76-018

Abstract: An evaluation is presented on state-of-the-art radon daughter control measures for proposed structures which have radon exhalation through the foundations. Five technologies are evaluated for cost-effectiveness: ventilation, polymeric sealants, excavation, ventilated crawl space construction, and improved slab construction. The implementation of these control measures by the builder through interaction with local health authorities is also evaluated.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
10043-92-2	RADON

PB81-105942

Pressure Sensitive Tape and Label Surface Coating Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Aug 80, 327p, EPA-450/3-80-003A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2891	ADHESIVES AND SEALANTS

PB81-105967

Glass Manufacturing Plants - Background Information for Promulgated Standards of Performance
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 175p, EPA-450/3-79-005B, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS

PB81-108078
Source Assessment: Dry Bottom Utility Boilers Firing Pulverized Bituminous Coal
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
D. G. DeAngelis, et al.
Oct 80, 210p, EPA-600/2-80-042C, PC A10/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
50	WHOLESALE TRADE-DURABLE GOODS
507	HARDWARE, PLUMBING & HEATING EQUIPMENT
5074	PLUMBING & HYDRONIC HEATING SUPPLIES

PB81-110926
Industrial Process Profiles for Environmental Use: Chapter 27. Primary Lead Industry
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
Jul 80, 83p, EPA-600/2-80-168, PC A05/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
7439-92-1	LEAD POWDER

PB81-111536
Exposure to Pollutants from Domestic Combustion Sources: A Preliminary Assessment
EPA, Research Triangle Park, NC, IERL
TRC Environmental Consultants, Inc.
E.T. Brookman, A. Birenzvige
Apr 80, 51p, EPA-600/7-80-084, PC A04/MF A01

Abstract: The report gives results of a preliminary assessment of exposure to pollutants from domestic combustion sources, some of which emit airborne particulate matter (PM), CO, and polycyclic organic matter (POM) near human receptors. Transient ambient concentrations of these pollutants at the receptor (and the corresponding time-averaged exposures) have been determined for the following domestic combustion sources: lawn mowing, chain sawing, charcoal cooking, indoor gas cooking, and indoor side-stream smoke. Transient ambient concentrations of total suspended particulate (TSP) matter encountered were as high as 35 times the 24 hour secondary ambient air quality standard of 150 micrograms/cu m for TSP. However, large quantities of noncombustion-related PM on the filters (e.g., grass particles, sawdust), concurrent lower values of ambient CO relative to ambient air quality CO standards, and the absence of detectable POM indicate that these sources probably do not result in exposures to combustion-generated pollutants that are relatively significant.

CL-IAP	INDOOR AIR POLLUTANTS
CL-POM	POLYCYCLIC ORGANIC MATTER
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB81-113599
POM (Polycyclic Organic Matter) Source and Ambient Concentration Data: Review and Analysis
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
J.B. White, R.R. Vanderslice
Mar 80, 147p, EPA-600/7-80-044, PC A07/MF A01

Abstract: The report gives results of an analysis of source and ambient concentration data for polycyclic organic matter (POM). Based on the literature reviewed, POM data were summarized and the sampling and analytical techniques were critiqued and evaluated against state-of-the-art technology. It was concluded that sampling techniques contain uncertainties that limit the usefulness of these data in an environmental assessment of POM. The uncertainties include the possibility of the incomplete capture of POM during emission sampling, the chemical degradation of the collected sample during both emission source and ambient sampling, and the unproven reliability of benzo(a)pyrene as an indicator of total POM from emission sources or in ambient media. The uncertainties may be compounded by losses during analysis. Also, since it is not feasible to quantify all the POM which may be present in an environmental sample, the number of POMs reported will reflect the scope of the analytical strategy and the limitations of the analytical technique employed.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
50-32-8	BENZO(A)PYRENE

PB81-113904
Beverage Can Surface Coating Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 225p, EPA-450/3-80-036A, PC A10/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
341	METAL CANS AND SHIPPING CONTAINERS
3411	METAL CANS

PB81-113920
Automobile and Light-Duty Truck Surface Coating Operations - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 35p, EPA-450/3-79-030B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
3711	MOTOR VEHICLES AND CAR BODIES

PB81-113938
Surface Coating of Metal Furniture - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 80, 406p, EPA-450/3-80-007A, PC A18/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
25	FURNITURE AND FIXTURES
251	HOUSEHOLD FURNITURE
2514	METAL HOUSEHOLD FURNITURE
252	OFFICE FURNITURE
2522	METAL OFFICE FURNITURE
253	PUBLIC BUILDING & RELATED FURNITURE
2531	PUBLIC BUILDING & RELATED FURNITURE
259	MISCELLANEOUS FURNITURE AND FIXTURES
2599	FURNITURE AND FIXTURES, NEC

PB81-117145
Publication Rotogravure Printing - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 80, 259p, EPA-450/3-80-031A, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
27	PRINTING AND PUBLISHING
275	COMMERCIAL PRINTING
2754	COMMERCIAL PRINTING, GRAVURE

PB81-118747

Ammonium Sulfate Manufacture - Background Information for Promulgated Emission Standards

EPA, Research Triangle Park, NC, OAQPS

Oct 80, 22p, EPA-450/3-79-034B, PC A02/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7783-20-2	AMMONIUM SULFATE

PB81-122129

Review of New Source Performance Standards for Phosphate Fertilizer Industry - Revised

EPA, Research Triangle Park, NC, OAQPS

Nov 80, 83p, EPA-450/3-79-038R, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS

PB81-122996
Comparison of Gas Phase Hydrocarbon Emissions from Light-Duty Vehicles Equipped with Diesel Engines
EPA, Ann Arbor, MI, OMS
C. and J. Cohen
Sep 80, 31p, EPA-AA-CTAB/PA/80-5, PC A03/MF A01

Abstract: The purpose of this document is to consolidate much of the existing data on gas phase hydrocarbon exhaust emissions from both gasoline vehicles and vehicles equipped with diesel engines. This subject is of interest because new studies have shown diesel emission to contain compounds of high molecular weight. This high molecular weight component is dominated by particle-bound hydrocarbons; however, the potential health risk associated with heavy hydrocarbons merits examination of the gas phase as well. Particular emphasis will be placed on the comparison of emissions and their potential carcinogenicity. Other areas to be discussed include evaporative hydrocarbon emissions and the effect of fuel composition on gasoline gaseous hydrocarbon emissions.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT

PB81-123572
Metal Coil Surface Coating Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 80, 216p, EPA-450/3-80-035A, PC A10/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB81-125015
Polynuclear Aromatic Compounds. Synthesis and Purification
EPA, Research Triangle Park, NC, ESRL
Oklahoma State University, Stillwater
E.J. Eisenbraun
Dec 80, 100p, EPA-600/2-80-204, PC A05/MF A01

Abstract: The synthesis and/or purification of a group of polynuclear aromatic (PNA) compounds commonly found as pollutants in the environment are reviewed and discussed. Details of the experi-mental procedures and techniques as well as chromatographic and spectroscopic evidence of structure and purity of the compounds supplied to the U.S. Environmental Protection Agency are presented. In addition, the apparatus designed and constructed to meet the synthesis needs together with safety improvements for -handling toxic compounds are described. Publications resulting from this work and manuscripts in preparation are cited.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB81-136160
Source Assessment: Residential Combustion of Wood
EPA, Research Triangle Park, N.C., IERL
Monsanto Research Corp.
D. G. DeAngelis, et al.
Mar 80, 102p, EPA-600/2-80-042B, PC A06/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB81-147001
Measurement of Asbestos Air Pollution Inside Buildings Sprayed with Asbestos
EPA, Washington, DC, OPTS, Midwest Research Inst.
P. Sebastien et al.
Aug 80, 75 p, EPA-560/13-80-026, PC A04/MF A01

Abstract: This report is a translation of a document prepared in 1977 for the French Ministry of Health and the French Ministry for the Quality of Life-Environment on the measurement and assessment of airborne asbestos levels in buildings throughout Paris. The methods of air sampling and transmission electron microscopic analysis, as well as a discussion of the results, are presented. Also included are extensive tables and figures summarizing the data collected. The study was completed in 1977, by the Laboratoire d'Etude des Particules Inhalees (Prefecture de Paris) and the Institut de Recherches Universitaires Sur l'Environment (Universite' Paris-Val de Marne). Mr. Patrick Sebastien (Prefecture de Paris) provided this revised update of the study in July 1980.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS

PB81-151433
Benzene Emissions from Benzene Storage Tanks - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 80, 277p, EPA-450/3-80-034A, PC A13/MF A01

Abstract: Standards of Performance for the control of emissions from benzene storage tanks are being proposed under the authority of Section 112 of the Clean Air Act. These standards would apply to all new and existing storage tanks having the capacity of 4 cubic meters or larger, which are to be used for the storage of pure benzene. Existing sources will have to comply with the standards within 90 days of its effective date, unless a waiver of compliance is secured from the Administrator. This document contains background information and environmental and economic impact assessment of the regulatory alternatives considered in developing the proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB81-151664
Benzene Fugitive Emissions - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 292p, EPA-450/3-80-032A, PC A13/MF A01

Abstract: A national emission standard for petroleum refining and organic chemical manufacturing industries is being proposed under authority of Section 112 of the Clean Air Act (42 U.S.C. 7412, as amended). The purpose of the proposed standard is to minimize benzene fugitive emissions in these industries. The document provides background information for the proposed standard. Control technologies and five regulatory alternatives are evaluated in terms of environmental and economic impacts on both new and existing emission sources. Included in the evaluation of economic impacts are estimates of total capital and annualized costs, including recovery credits.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB81-152167
VOC Fugitive Emissions in Synthetic Organic Chemicals Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 245p, EPA-450/3-80-033A, PC A11/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS

PB81-157810
Review of Standards of Performance for New Stationary Sources - Ferroalloy Production Facilities
EPA, Research Triangle Park, NC, OAQPS
PEDCo - Environmental, Inc.
R. W. Gerstle, W. F. Kemner, L. V. Yerino
Dec. 80, 98p, EPA 450/3-80-041, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development or each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
3313	ELECTROMETALLURGICAL PRODUCTS

PB81-161937
Source Assessment: Cotton and Synthetic Woven Fabric Finishing
EPA, Research Triangle Park, NC, IERL
Monsanto Research Corp.
W. D. McCurley, G. D. Rawlings
Jan 80, 196p, EPA-600/2-80-042A, PC A09/MF A01

Abstract: This report is one in a series of source assessments, each describing air emissions from a particular industry. Each source assessment contains a description of industrial processes and identifies major emission points and pollutants. Emission factors or rates are given for the major pollutants from the source under study. Control technology is discussed. Finally, source severity factors are calculated as a measure of the potential environmental effects of air emissions from the industry.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
223	WEAVING AND FINISHING MILLS, WOOL
2231	WEAVING AND FINISHING MILLS, WOOL
225	KNITTING MILLS
2252	HOSIERY, NEC
2258	WARP KNIT FABRIC MILLS
226	TEXTILE FINISHING, EXCEPT WOOL
2261	FINISHING PLANTS, COTTON
2262	FINISHING PLANTS, SYNTHETICS
2269	FINISHING PLANTS, NEC

PB81-164600
UNAMAP (Version 4), User's Network for Applied Modeling of Air Pollution
EPA, Research Triangle Park, NC, ESRL
D. Turner, and D. Busse
Feb 81, mag tape, EPA-DF-81-001, CP T13

Abstract: Source tape is in ASCII character set. Restricted to 9 track 1/2 inch tape. Identify mode by specifying density only. Price includes documentation, PB-294 791, PB-294 792, PB-271 360, PB-227 346, PB-274 040, PB-213 091, PB-239 944, PB-274 054, PB-281 306, PB80-227572, PB80-197361, PB80-227556, PB80-133044, PB80-133051, PB81-164618, PB81-164626, PB81-164634, PB81-164642, PB81-164659, PB81-164667. The User's Network for Applied Modeling of Air Pollution UNAMAP (Version 4) contains 21 air quality simulation models (AQSM). These models input emission and meteorological data to calculate projected air pollutant concentrations. UNAMAP contains state-of-the-art dispersion research algorithms supported by U.S. Environmental Protection Agency's (EPA) Office of Research and Development. The UNAMAP (Version 4) contains ten (10) new models. In addition, most of the original UNAMAP models have undergone extensive revision. The system is written in the FORTRAN programming language for implementation on a UNIVAC 1100/82 computer using the 36R2B operating system. 69K 6-character words are required to operate the least model of the system.

DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB81-164618
UNAMAP (Version 4), User's Network for Applied Modeling of Air Pollution: Test Data Output
EPA, Research Triangle Park, NC, ESRL
Feb 71, 259p, EPA-DR/81-001A, PC A12/MF A01

Abstract: These 258 pages of computer printout represent the output that results from applying test data to UNAMAP Ver. 4 dispersion models. The test data is included in each model file on the UNAMAP Ver. 4. An index relating page number of the printout to specific models is given as part of the UNAMAP description.

DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY

P881-164626
User's Guide to the Texas Climatological Model
EPA, Washington, DC
Texas Air Control Board
Aug 80, 186p, EPA-DF/81/001B, PC A09/MF A01

Abstract: The Texas Climatological Model Version 2 (TCM-2) (Part of the UNAMAP version 4 collection) is a Fortran computer program designed to predict ground-level, long-term concentrations of atmospheric pollutants. The Model uses techniques that require much less computer time than most climatological models. Predictions are based upon the steady-state Gaussian plume hypothesis, Briggs plume rise formulations, Pasquill-Gifford dispersion coefficient approximations, and exponential pollutant decay. Long-term ground-level concentrations may be determined for one or two pollutants. Any number of point sources and area sources may be input to the model. Long-term meteorological conditions are input by a meteorological joint frequency function which gives the probability of occurrence for each of 576 different cases. Five scenarios of meteorological data and source emission inventories may be input to the model for one run. Plume rise is calculated by the most representative of six different methods and optionally can use only final rise. An option allows the simulation of dispersion found in urban areas.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

P881-164634
Development of an Air Quality Dispersion Model for Aluminum Reduction Plants
EPA, Washington, DC
Environmental Research and Technology, Inc.
L.L. Schulman and J.S. Scire
Aug 80, 73p, EPA-DR/81-001C, PC A04/MF A01

Abstract: An Air quality dispersion model, BLP, (Part of the UNAMAP version 4 collection) was developed to simulate the transport and diffusion of effluents from aluminum reduction plants. These plants are complex emission configurations consisting of multiple parallel low-level buoyant line sources interspersed, in most cases, by short point sources. Available air quality models do not adequately describe the dispersion of effluents from aluminum reduction plants or other geometrically similar facilities. A wind tunnel simulation program of two aluminum reduction plants and an SF6 field tracer program at one of these plants was used to obtain data for the development of the model. The model determines plume rise from buoyant line sources and analytically incorporates the effects of multiple lines, wind direction, vertical wind speed shear, and downwash. Plume rise from buoyant point sources also incorporates the effects of vertical wind speed shear and downwash.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY
33 PRIMARY METAL INDUSTRIES
336 NONFERROUS FOUNDRIES
3361 ALUMINUM FOUNDRIES

PB81-164642
Buoyant Line and Point Source (BLP) Dispersion Model User's Guide
EPA, Washington, DC
Environmental Research and Technology, Inc.
L.L. Schulman, and J.S. Scire
Jul 80, 190p, EPA-DF/81-001D, PC A09/MF A01

Abstract: The BLP Dispersion model was developed specifically for aluminum reduction plants. It is part of the UNAMAP version 4 collection. Aluminum reduction plants are a complex arrangement of emission sources, composed of parallel, low-level, buoyant line sources called potrooms interspersed, typically, by short point sources. In addition to theoretical considerations, BLP is based on extensive wind tunnel simulations of two reduction plants and an SF6 field study tracer program at one of the plants. The model has been verified using two years of SO2 measurements at the second reduction plant. The major features of the BLP disperstion model are: UTM or line source oriented coordinate system; multiple point source and finite buoyant line source capability; finite buoyant line source plume rise, plume enhancement due to multiple line sources; vertical wind shear in plume rise formulations for both point and line sources; transitional plume rise; incorporation of building downwash in both dispersion and plume rise calculations for point and line sources; terrain adjustment plume path coefficients; time-dependent pollutant decay; source contribution concentrations; and flexible post-processing package.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY
33 PRIMARY METAL INDUSTRIES
336 NONFERROUS FOUNDRIES
3361 ALUMINUM FOUNDRIES
7446-09-5 SULFUR DIOXIDE

PB81-164659
Addendum/Supplemental Information for Valley, CRSTER, ISC.
EPA, Washington, DC
Environmental Research and Technology, Inc.
Dec 80, 49p, EPA-DR/81-001E, PC A03/MF A01

Abstract: This information on three models is part of the UNAMAP ver. 4 package. It enables users to update their user's guides for all three models. The coding changes mentioned in this publication have already been made to the source code included as part of the UNAMAP ver. 4 tape.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

PB81-164667
User's Guides to the Interactive Version of Three Point Source Dispersion Programs: PTMAX, PTDIS, and PTMTP
EPA, Research Triangle Park, NC, ESRL
D.B. Turner, and A.D. Busse
Jun 73, 30p, EPA-DF-81/001F, PC A03/MF A01

Abstract: This document covers the PTMAX (Part of the UNAMAP version 4 collection) which is an interactive program which performs an analysis of the maxium, short-term concentration from a point source as a function of stability and wind speed. PTDIS is an interactive program which computes short-term concentrations downwind from a point source at distances specified by the user. PTMTP is an interactive program which computes, at multiple receptors, short term concentrations resulting from multiple point sources. All of the models are part of the UNAMAP version 4 collection.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

PB81-164915
Industrial Process Profiles for Environmental Use: Chapter 29. Primary Copper Industry
EPA, Cincinnati, OH, IERL
PEDCo - Environmental, Inc.
Jul 80, 155p, EPA-600/2-80-170, PC A08/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT
33 PRIMARY METAL INDUSTRIES
333 PRIMARY NONFERROUS METALS
3331 PRIMARY COPPER

PB81-167876
Extent of Exposure Survey of Methylene Chloride
National Institute of Occupational Safety and Health
1980, 47 p., PC A04/MF A01
NIOSH PUB No: 80-131, AVAIL NIOSH
GPO No: 017-033-00365-3, $4.75

Abstract: Occupational exposures to methylene chloride (75-09-2) were assessed at a facility that manufactured acetate and triacetate fibers, at a coffee processing facility, and at a U.S. Air Force aircraft maintenance facility. Process and control operations, personnel activity and health and safety programs at each installation were evaluated. Exposures to methylene chloride at the manufacturing facility were 31 to 561 parts per million (ppm). Only one of these samples exceeded the OSHA standard of 500 ppm. At the other two facilities, methylene chloride concentrations generally were below OSHA standards. The authors recommended that the OSHA standard for methylene chloride be lowered to 75 ppm.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
20	FOOD AND KINDRED PRODUCTS
209	MISC. FOODS AND KINDRED PRODUCTS
2095	ROASTED COFFEE
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2823	CELLULOSIC MAN-MADE FIBERS
37	TRANSPORTATION EQUIPMENT
372	AIRCRAFT AND PARTS
75-09-2	METHYLENE CHLORIDE

PB81-168510
Teratologic Assessment of Butylene Oxide, Stryrene Oxide and Methyl Bromide
National Institute of Occupational Safety and Health
1980, 76 p., PC A05/MF A01
NIOSH PUB No: 81-124, AVAIL NIOSH
GPO No: 017-033-00389-1, $5.00

Abstract: The general toxicology of butylene oxide (106-88-7) (bo), styrene oxide (96-09-3) (so), and methyl bromide (74-83-9) (mb) was investigated. Rats were exposed 7 hours a day for 5 days a week for 3 weeks, mated, and exposed for 19 days of gestation (dg). Pregnant rabbits were exposed 7 hours a day for 24 dg. Exposure chamber concentrations were monitored and ranged from 250 to 1,000; 100 to 300; and 20 to 70 parts per million (ppm) for bo, so, and mb, respectively. So concentrations were reduced to 15 to 50 ppm for rabbits. Bo and mb produced little toxic symptomology in rats; bo in both concentrations elevated rabbit mortality values; mb in the higher concentration tested produced severe neurotoxicity and 96 percent mortality. Bo produced minimal embryotoxic effects in rabbits when introduced at concentrations that were maternally toxic. Mb was not notably embryotoxic. An extensive mortality occurred with so exposures at 100 and 300 ppm for rats and rabbits, respecitively. Lower concentrations were adopted for testing. A 50 ppm so inhalation exposure caused death in rabbits at a 79 percent rate and gestational exposure decreased fecundity in rats, increased resorptions in rabbits and decreased fetal weight and length in both animals.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
106-88-7	EPOXYBUTANE,1,2-
109-99-9	TETRAHYDROFURAN
74-83-9	METHYL BROMIDE
96-09-3	STYRENE OXIDE

PB81-171027
Carcinogenicity and Metabolism of Azo Dyes, Especially Those Derived from Benzidine
National Institute of Occupational Safety and Health
1980, 141 p., PC A07/MF A01
NIOSH PUB No: 80-119, UNAVAIL NIOSH

Abstract: Studies on the sites of carcinogenic action of benzidine (92-87-5) in man and experimental animals, benzidine metabolism, azo compounds metabolism, and the epidemiological experience of industries using azo dyestuffs are reviewed. Industrial hygiene surveys to monitor the environment of workers exposed to azo dyes, monitor urinary excretions of aromatic amines and benzidine of those workers, and evaluate the effects of exposure to and the metabolism of azo dyes are described. The author concludes that benzidine derived dyes are potential carcinogens and recommends that other safe dyes be substituted for these dyes when possible.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
92-87-5	BENZIDINE

PB81-193278
Human Exposure to Atmospheric Concentrations of Selected Chemicals
EPA, Research Triangle Park, NC, OAQPS
SRI International
1980, 285p., PC A13/MF A01

Abstract: Population exposure was estimated for four chemicals emitted into the ambient air. The exposure assessments identify types and locations of sources of air population; estimate emissions, ambient concentrations, and surrounding populations; and provide rough, order-of-magnitude estimates of the number of people exposed to various concentrations of the individual chemicals on a nationwide basis.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE

PB81-201394
A Prototype Gas Analysis System Using a Miniature Gas Chromatograph
National Institute of Occupational Safety and Health
James B. Angell Stanford University, Apr 81, 81p, EPA-700/7-80-184

Abstract: The techniques of integrated circuit processing have been utilized to miniaturize the main components of a gas chromatography system. The system can automatically sample the air, measure the concentration of up to 10 contaminant vapors, calculate and store contaminant concentrations, and estimate average worker exposures. The instrument can be used as an exposure monitor to sample the air at 1.5 minute intervals for an 8-hour shift, or it can be used as a survey instrument to take and analyze samples and provide concentration information within 30 seconds of sampling. The small size, advanced capabilities, and ease of operation of the system should have a significant impact on the fields of industrial hygiene and occupational safety and health. The instrument will greatly expand the ability to monitor workers' exposures to toxic gases and therefore aid in the reduction of such exposures, and provide better epidemological data in future health studies.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
EA	EXPOSURE ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB81-223547
Extent of Exposure Survey of Methyl Chloride.
National Institute of Occupational Safety and Health
1980, 42 p., PC A03/MF A01
NIOSH PUB No: 80-134, AVAIL NIOSH

Abstract: Industrial exposures to methyl chloride (74-87-3) are discussed. The toxic effects of methyl chloride are reviewed along with analytical procedures for collection and analysis of methyl chloride samples. Several workplaces that use methyl chloride are described, together with various industrial applications of the chemical. Jobs requiring the use of methyl chloride are identified, and current industrial hygiene and safety practices, including engineering controls, work practices, administrative controls, and biological and environmental sampling and control procedures are described. Chemical and physical data for methyl chloride are presented. The results of detailed industrial hygiene surveys at four United States facilities were the chemical is used are included.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
74-87-3	METHYL CHLORIDE

PB81-225278
Criteria for a Recommended Standard: Occupational Exposure to Inorganic Lead
National Institute of Occupational Safety and Health
1978, 211 p., PC A10/MF A01
NIOSH PUB No: 78-158, AVAIL NIOSH
GPO No: 017-033-00306-8, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7439-92-1	LEAD POWDER

PB81-225526
Criteria for a Recommended Standard: Occupational Exposure to Nitroglycerin and Ethylene Glycol Dinitrate
National Institute of Occupational Safety and Health
1978, 223 p., PC A10/MF A01
NIOSH PUB No: 78-167, UNAVAIL NIOSH
GPO No: 017-033-00311-4, $4.75

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
55-63-0	NITROGLYCERINE
628-96-6	ETHYLENE GLYCOL DINITRATE

PB81-225534
Criteria for a Recommended Standard: Occupational Exposure to Nitriles
National Institute of Occupational Safety and Health
1978, 163 p., PC A08/MF A01
NIOSH PUB No: 78-212, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB81-225609
Criteria for a Recommended Standard: Occupational Exposure to N-Alkane Mono Thiols, Cyclohexanethiol, and Benzenethiol
National Institute of Occupational Safety and Health
1978, 129 p., PC A07/MF A01
NIOSH PUB No: 78-213, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
108-98-5	BENZENETHIOL
1569-69-3	CYCLOHEXANETHIOL

PB81-225617
Criteria for a Recommended Standard: Occupational Exposure to Acrylonitrile
National Institute of Occupational Safety and Health
1978, 14 p., PC A02/MF A01
NIOSH PUB No: 78-116, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
107-13-1	ACRYLONITRILE

PB81-225625
Criteria for a Recommended Standard: Occupational Exposure to Carbon Black
National Institute of Occupational Safety and Health
1978, 107 p., PC A06/MF A01
NIOSH PUB No: 78-204, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1333-86-4	CARBON BLACK

PB81-225633
Special Occupational Hazard Review for Benzidine-Based Dyes
National Institute of Occupational Safety and Health
1980, 60 p., PC A04/MF A01
NIOSH PUB No: 80-109, AVAIL NIOSH
GPO: 017-033-00354-8, $4.25

Abstract: Dyes constitute a large and diverse group of chemicals that have diverse applications for imparting color to many types of products. They may be broadly defined as water-soluble chemical substances that contain chromophoric structures and thus may be used to color another substances by becoming attached to it by molecular bonding, adsorption, absorption, or mechanical adherence. The common starting material for the manufacturer of these dyes, benzidine, is acknowledged by both industry and government (Federal Register 39(20):3756-97, January 29, 1974) to cause bladder cancer. This is based on considerable evidence from studies with humans as well as with animals. The carcinogenicity of benzidine was reviewed by Clayson and by Haley. The evidence presented in those reviews demonstrates that both brief and prolonged exposures to benzidine have been associated with the development of bladder cancer in workers.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
92-87-5	BENZIDINE

PB81-225641
Special Occupational Hazard Review and Control Recommendations-Chrysene
National Institute of Occupational Safety and Health
1978, 49 p., PC A04/MF A01
NIOSH PUB No: 78-163, UNAVAIL NIOSH

Abstract: Exposure to chrysene as an isolated chemical presently occurs only in specific occupations, i.e., chrysene synthesis, laboratory experimentation, and possibly in the synthesis of anthraquinone vat dyes. However, chrysene and its derivatives, e.g., certain methylchrysene isomers, along with hundreds of other polycyclic aromatic hydrocarbons (PAH's), are formed during the pyrolysis of organic matter and can occur in any occupational environment where this process takes place. While it has been suggested that 700C is the optimum pyrolytic temperature for PAH-formation, other factors such as the chemical and physical nature of the pyrolyzed material, the presence or absence of oxygen, and the period of time during which the compound is pyrolyzed also determine the amounts and mixtures of various PAH's formed. Chrysene has been detected in many materials which result from, or are used in, industrial processes. Chrysene also has been detected in the ambient atmosphere and in certain food products.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
218-01-9	CHRYSENE

PB81-225658
Criteria for a Recommended Standard: Occupational Exposure to Vanadium
National Institute of Occupational Safety and Health
1977, 150 p., PC A08/MF A01
NIOSH PUB No: 77-222, UNAVAIL NIOSH
GPO No: 017-033-00252-5, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-62-2	VANADIUM

PB81-225690
Criteria for a Recommended Standard: Occupational Exposure to Hydrazines
National Institute of Occupational Safety and Health
1978, 277 p., PC A13/MF A01
NIOSH PUB No: 78-172, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
302-01-2	HYDRAZINE

PB81-225823
Asbestos in Schools
EPA, Washington, DC, OPTS
Battelle Columbus Labs
J.L. Patton, et al. Mar 81, 264p, EPA-560/5-81-02, PC A12/MF A01

Abstract: Four approaches to assessing the potential for asbestos exposure in schools were evaluated: (1) a proposed exposure-ranking system or algorithm, (2) bulk sampling and analysis of the asbestos-containing materials, (3) a measurement of stimulated fiber release, and (4) air sampling. The scoring consistency was evaluated for the factors in the algorithm; friability and activity was scored with the least consistency, and exposure and the presence of air-moving systems with the most consistency. The variability in the determination of asbestos content was found to be associated with the laboratory analsis more so than with the sampling process. The potential for release of fibers by physical disturbance of the asbestos-containing material was demonstrated with the use of a vibrator in contact with ceilings in schools. Only a limited effort was devoted to air sampling. The airborne fiber levels were less than 0.07 fibers/cc in all cases but one.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB81-225849
Asbestos-Containing Materials in School Buildings:
Bulk Sample Analysis Quality Assurance Program
EPA, Washington, DC, OPTS
Midwest Research Inst.
E.P. Brantly, Jr.
Mar 81, 34p, EPA-560/5-81-001, PC A03/MF A01

Abstract: The second round of the Environmental Protection Agency (EPA) voluntary quality assurance (QA) program for commercial laboratories claiming capability in the polarized light microscope analysis of bulk samples for asbestos was conducted in August and September, 1980. Seventy six laboratories each received bulk samples of two asbestiform minerals and two nonasbestos materials: amosite, crocidolite, cellulose, and wollastonite. A performance rating based on correct classification of positive (asbestos) and negative (non-asbestos) samples was scored for and reported to participating laboratories. Among the inaccurate results reported were 3 false negatives (crocidolite) and 32 false positives (3 cellulose, 29 wollastonite). QA program results are made available to the laboratories, the EPA, and the public. Continuation of the QA program with future sample sets is anticipated.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB81-226060
Criteria for a Recommended Standard: Occupational Exposure to Antimony
National Institute of Occupational Safety and Health
1978, 125 p., PC A07/MF A01
NIOSH PUB No: 78-216, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-36-0	ANTIMONY

PB81-226508
Criteria for a Recommended Standard: Occupational Exposure to Hydroquinone
National Institute of Occupational Safety and Health
1978, 175 p., PC A09/MF A01
NIOSH PUB No: 78-155, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
123-31-9	HYDROQUINONE

PB81-226516
Criteria for a Recommended Standard: Occupational Exposure to Hydrogen Fluoride
National Institute of Occupational Safety and Health
1976, 182 p., PC A09/MF A01
NIOSH PUB No: 76-143, UNAVAIL NIOSH
GPO No: 017-033-00171-5, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7664-39-3	HYDROGEN FLUORIDE

PB81-226615
Criteria for a Recommended Standard: Occupational Exposure to Diisocyanates
National Institute of Occupational Safety and Health
1978, 138 p., PC A08/MF A01
NIOSH PUB No: 78-215, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

CL-DIISOCY DIISOCYANATES
HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB81-226656
Special Occupational Hazard Review for DDT
National Institute of Occupational Safety and Health
1978, 214 p., PC A10/MF A01
NIOSH PUB No: 78-200, UNAVAIL NIOSH

Abstract: This document on DDT and a companion document prepared for Aldrin/Dieldrin serve as comprehensive reports on three of the most representative compounds of the organochlorine class of insecticides. Together with the NIOSH criteria documents on the four insecticides previously mentioned, the DDT and Aldrin/Dieldrin reports will form the basis for NIOSH recommendations for international occupational health standards. DDT is produced and marketed in the United States but is use is restricted to specified applications by the U.S. Public Health Service and Department of Agriculture and for controlling body lice (37 Federal Register 13369, July 7, 1972). More importantly, DDT is widely used in agriculture and for vector control outside the U.S., although resistance to DDT in agriculture pests has increased since its introduction. Total worldwide use of DDT for the decade 1971-81 is predicted to be 94,000 metric tons/year.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
50-29-3 DDT

PB81-226698
Criteria for a Recommended Standard: Occupational Exposure to Benzyl Chloride
National Institute of Occupational Safety and Health
1978, 98 p., PC A05/MF A01
NIOSH PUB No: 78-182, AVAIL NIOSH
GPO No: 017-033-00316-5, $5.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
100-44-7 BENZYL CHLORIDE

PB81-226987
Special Occupational Hazard Review With Control Recommendations - Trichloroethylene
National Institute of Occupational Safety and Health
1978, 89 p., PC A05/MF A01
NIOSH PUB No: 78-130, UNAVAIL NIOSH

Abstract: This hazard review provides a brief description of the production, uses, toxicity, and metabolism of TCE and a more detailed assessment of TCE's potential as a workplace carcinogen. In addition, the results of a recent survey of industrial vapor degreasing operations, the primary source of occupational exposures to TCE, are presented along with data from other surveys or reviews to document the extent and nature of occupational exposures to TCE and existing control methods.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
79-01-6 TRICHLOROETHYLENE

PB81-227027
Criteria for a Recommended Standard: Occupational Exposure to Methylene Chloride
National Institute of Occupational Safety and Health
1976, 167 p., PC A09/MF A01
NIOSH PUB No: 76-138, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-09-2	METHYLENE CHLORIDE

PB81-227084
Criteria for a Recommended Standard: Occupational Exposure to o-Tolidine
National Institute of Occupational Safety and Health
1978, 85 p., PC A05/MF A01
NIOSH PUB No: 78-179, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
119-93-7	DIMETHYLBENZIDINE,3,3'-

PB81-227217
Criteria for a Recommended Standard: Occupational Exposure to Nitric Acid
National Institute of Occupational Safety and Health
1977, 78 p., PC A05/MF A01
NIOSH PUB No: 76-141, UNAVAIL NIOSH
GPO No: 017-033-00169-3, $5.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7697-37-2	NITRIC ACID

PB81-228728
Criteria for a Recommended Standard: Occupational Exposure to Dibromochloropropane
National Institute of Occupational Safety and Health
1978, 14 p., PC A02/MF A01
NIOSH PUB No: 78-115, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
96-12-8	DIBROMOCHLOROPROPANE,1,2-,3-

PB81-229700
Criteria for a Recommended Standard: Occupational Exposure to Glycidyl Ethers
National Institute of Occupational Safety and Health
1978, 205 p., PC A10/MF A01
NIOSH PUB No. 78-166, UNAVAIL NIOSH
GPO No: 017-033-00313-1, $7.00

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB81-232076
TSCA Chemicals in Commerce Inventory: Regional and State Perspectives (Toxics Integration Information Series 1980)
EPA, Washington, D.C., OPTS
D.L. Kaufman, et al.
Aug 81, 106p, EPA-560/TIIS-81-005, PC A06/MF A01

Abstract: Using the CICIS Inventory it was possible to determine which chemical substances were produced exclusively in each of the 10 EPA regions. Slightly less than 50% of the inventory is region-specific. Confidential Inventory runs do not affect this finding. A regulatory status of the top 440 high production volume chemicals (a production volume range of 10-50 million lbs/yr was selected as a cut-off point) was completed and it appeared that only 95 specific chemical substances were undergoing any sort of assessment, regulation development, or were already regulated. Document will provide the regions guidance in their priority setting.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB81-232969
Toxic Substances Control Act Grants to States (Toxics Integration Information series)
EPA, Washington, DC, OPTS
R.E. Janney
Jun 81, 71p, EPA-560/TIIS-81-003, PC A04/MF A01

Abstract: The report describes State projects funded under section 28 of the Toxic Substances Control Act. Section 28 allows Federal assistance to States wishing to develop toxic substances investigation and control programs. Approximately $4.5 million was awarded, over a three-year period, to nine States--Illinois, Maryland, Michigan, New Jersey, New York, North Carolina, Ohio, Puerto Rico and Wisconsin.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB81-244048
Characterization of Diesel Emissions as a Function of Fuel Variables
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
B. Bykowski
Apr 81, 288p, EPA-460/3-81-015, PC A13/MF A01

Abstract: Several properties of a refinery 'straight-run kerosene', which had a narrow boiling range approximating the middle of a No. 1 diesel fuel, were altered to study their effects on regulated and unregulated exhaust emissions. Eleven fuel blends, representing changes in nitrogen content, aromatic level, boiling point distribution, olefin content, and cetane number, were evaluated in a 1975 Mercedes-Benz 240D. Statistical analysis, including regression, was performed using selected fuel properties as independent variables. Higher aromatic levels were generally associated with increased emissions, while increased olefin levels were generally associated with decreased emissions.

CL-HCARB	HYDROCARBONS
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT

PB81-277001
Criteria for a Recommended Standard: Occupational Exposure During the Manufacture and Formulation of Pesticides.
National Institute of Occupational Safety and Health
1978, 440 p., PC A19/MF A01
NIOSH PUB No: 78-174, UNAVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB81-277019
Criteria for a Recommended Standard: Occupational Exposure to Epichlorohydrin
National Institute of Occupational Safety and Health
1976, 162 p., PC A08/MF A01
NIOSH PUB No: 76-206, UNAVAIL NIOSH
GPO No: 017-033-00197-9, $6.50

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
106-89-8	EPICHLOROHYDRIN

PB82-101130
Unregulated Exhaust Emissions from Non-Catalyst Baseline Cars Under Malfunction Conditions
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
C. Urban
May 81, 185p, EPA-460/3-81-020, PC A09/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from 1970 model non-catalyst gasoline automobiles operating under malfunction conditions. Four automobiles were evaluated over three driving schedules in the unmodified configuration and in up the three engine and/or emissioncontrol system malfunction configurations. Exhaust emission constituents measured, in addition to the currently regulated emissions, include: particulates, sulfates, aldehydes, sulfides, amines, metals and several additional elements and compounds. Additional evaluations, in each of the configurations, involved the measurement of the regulated emissions over four short test procedures.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-SULFATE	SULFATES
CL-SULFIDE	SULFIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT

PB82-102476
Potential Atmospheric Carcinogens, Phase 2/3: Analytical Technique and Field Evaluation
EPA, Research Triangle Park, NC, ESRL
Monsanto Research Corp.
D. S. West, et al.
Jun 81, 267p, EPA-600/2-81-106, PC A12/MF A01

Abstract: A sampling system was developed for collecting 20 significant probable or possible atmospheric carcinogens from ambient air. The sampling system is based on a combination of solid sorbent materials consisting of Tenax-GC, Porapak R, and Ambersorb XE-340 arranged in series. Air samples are drawn through the system using a Nutech Model 221-1A pump. The system was evaluated in sampling trips to Los Angeles, Niagara Falls, and Houston. The results for analyses for the 20 selected compounds as well as additional broad scan data are presented. Analyses of the samples were accomplished using thermal desorption of the sorbent materials followed by capillary column gas chromatography/mass spectrometry (GC/MS). A sample collected in Houston was also analyzed using a conventional flame ionization detector, a N-P flame ionization detector, a photoionization detector and an electron capture detector. A comparison of the GC/MS and multidetector GC results was made.

AM	AMBIENT MONITORING
CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB82-111816
Thermal Conversion of Municipal Wastewater Sludge, Phase II: Study of Heavy Metal Emissions
EPA, Cincinnati, OH, MERL
Interstate Sanitation Commission, New York
Sep 81, 96p, EPA-600/2-81-203, PC A05/MF A01

Abstract: The object of this work was to compare and analyze heavy metal emissions associated with the thermal conversion (incineration) processes which can be conducted in a multiple-hearth furnace to dry municipal wastewater (sewage) sludge and reduce its volume by forming an ash or char. Sludge for this project was obtained from Jersey City, New Jersey. It contains about 8 percent solids which were increased to between 40 and 50 percent solid by adding polymer as a filter aid and filtering it in a 4 ft x 4 ft pilot filter press having expandable rubber diaphragm plates. A pilot scale multiple-hearth furnace, .91 m (36 inch) 10 x 6 hearth was used for the thermal conversion process. Sludge was subjected to thermal conversion at the conditions: (1) Incineration at 900C (1625F); (2) Low Temperature Conversion at 700C (1290F) (starved air combustion or pyrolysis); (3) High Temperature Conversion at 900C (1290F) (starved air combustion or pyrolysis). Results indicated that the low temperature conversion substantially retained cadmium, lead, and beryllium in the ash or char when compared to incineration. However, the ash retained far more silver during incineration than it did during high or low temperature conversion.

CL-METAL	METALLIC COMPOUNDS
CL-SEWSLUD	SEWAGE SLUDGE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-92-1	LEAD POWDER
7440-41-7	BERYLLIUM
7440-43-9	CADMIUM

PB82-111840
Special Occupational Hazard Review With Control Recommendations for Ethylene Thiourea
National Institute of Occupational Safety and Health
1978, 82 p., PC A05/MF A01
NIOSH PUB No: 79-109, AVAIL NIOSH

Abstract: Hazards associated with occupational exposure to ethylene--thiourea (96-45-7) (ETU) are reviewed. The chemical and physical properties of ETU are described and worker exposures during manufacture, production, and application are discussed. The extent of occupational exposure to ETU is assessed. The biological effects of ETU are reviewed based on laboratory animal studies. The potential effects of ETU on humans are also considered. The author concludes that ETU is a potential carcinogen and teratogen. Recommendations include worker education regarding the hazards of ETU, use of ETU in encapsulated forms, proper labeling of ETU, and the use of sanitary practices in the workplace.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
96-45-7	ETHYLENE THIOUREA

PB82-115163
Health Assessment Document for Cadmium
EPA, Research Triangle Park, NC,
L. D. Grant, et al.
Oct 81, 362p, EPA-600/8-81-023, PC A16/MF A01

Abstract: This document provides a critical assessment of health effects and public health risks associated with environmental exposure to cadmium (Cd). Sources and routes of exposure are discussed and identified. Dose-effect/ response relationships and populations at special risk are delineated. Cadmium is naturally present in most environmental media. Major anthropogenic sources are: (1) smelting and mining, (2) certain manufacturing processes, and (3) waste disposal operations. Food is the largest environmental source for most humans, although Cd intake from smoking can equal or exceed Cd intake from food. Acute non-lethal exposure is associated with chronic respiratory effects. However, since most environmental exposures to Cd are of a long-term, low-level type, primary emphasis has been placed on discussing effects of such chronic exposure. Cadmium's accumulation in the kidney results renal tubular dysfunction after many years of exposure. Estimates of the concentration of Cd in the renal cortex necessary to induce these effects and estimates of exposure necessary to produce the critical renal concentration vary widely, partially due to individual biological variability. Populations at special risk to Cd are cigarette smokers, as well as the older segments of the population (>50 years of age).

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
3333	PRIMARY ZINC
3339	PRIMARY NONFERROUS METALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB82-117052
Drinking Water and Health. Volume 2.
National Academy of Sciences
1980, 393 p., PC A18/MF A01
ISBN 0-309-02931-7, $16.95

Abstract: Chlorination is the most widely used method for disinfecting water supplies in the United States. It is convenient to use, effective against most waterborne pathogens, and continues disinfectant activity within the distribution system. Chlorination is the standard disinfectant against which others are compared. However, chlorination can result in the formation of trihalomethanes (THM's) and other halogenated hydrocarbons. The discovery that some of these products are carcinogenic for experimental animals has prompted a reexamination of alternate disinfectants and procedures. The comparative effectiveness of 12 disinfectants or processes for inactivating microorganisms were evaluated. Chlorination, ozonization, and the use of chlorine dioxide come closest to meeting the criteria established for a drinking water disinfectant. The ultimate choice among methods will require weighting the disinfectant efficacy against the toxicity of the products produced by the use of a particular method of disinfection. The major objective of the review of disinfectant chemistry is the identification of products that are likely to be formed by the use of specific disinfectants. The identification of known and theorectical products of disinfection is intended to be a guide to those contaminants that might require removal or toxicological evaluation.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB82-117060
Drinking Water and Health. Volume 3.
National Academy of Sciences
1980, 415 p., PC A19/MF A01
ISBN 0-309-02932-5, $17.50

Abstract: Contents: Executive summary; Epidemiological studies; Problems of risk estimation; Toxicity of selected drinking water contaminants; and the contribution of drinking water to mineral nutrition in humans.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB82-117870
The Determination of a Range of Concern for Mobile Source Emissions of Sulfuric Acid
EPA, Ann Arbor, MI, OMS
C. A. Harvey and R. Garbe
Aug 81, 29p, EPA/AA/CTAB/PA/81-21, PC A03/MF A01

Abstract: This paper describes an effort by the Emission Control Technology Division of the EPA to establish a range of concern for sulfuric acid (H_2SO_4) emissions from mobile sources. In light of the action called for in section 202(a)(4) of the Clean Air Act (CAA) and due to a concern within industry as to what emission levels will be used as the basis for the evaluation of current and future technologies, a methodology was developed in order to bracket a range of concern for various unregulated pollutants. This paper coordinates the efforts from two EPA contracts in order to use this methodology specifically for an evaluation of sulfuric acid.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
7664-93-9	SULFURIC ACID

P882-118159
Mobile Source Emissions of Formaldehyde and Other Aldehydes
EPA, Ann Arbor, MI, OMS
May 81, 37p, EPA-AA/CTAB-PA-81-11, PC A03/MF A01

Abstract: The available vehicular aldehyde studies were summarized in an attempt to characterize aldehyde emissions from motor vehicles. Topics covered in these studies include aldehyde emission factors for unmodified and malfunction vehicle engine configurations, effects of fuel, mileage accumulation and temperature variations and aldehyde emissions from Diesel-equipped vehicles equipped with prototype light-duty Diesel oxidation catalysts. Thus, it was possible to obtain aldehyde data for standard conditions and for a variety of operating conditions. The Federal test procedure (FTP) was used for the light-duty vehicles and the 13-mode test procedure for the heavy-duty engines. The 2, 4 dinitrophenylhydrazine (DNPH) procedure was used for the sampling and anlysis of the aldehydes. This procedure is discussed in the Appendix. In addition to aldehydes, the DNPH procedure detects two ketones, methylethylketone and acetone. Methylethylketone measurements are not included in this report. However, acetone and two aldehydes, acrolein and propionaldehyde are reported together as acetone since they are not resolved from each other under normal gas chromatographic operating conditions. The term "total aldehydes," as used in this report, includes the acetone measurements.

CL-ALDEHYD	ALDEHYDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
50-00-0	FORMALDEHYDE
67-64-1	ACETONE
78-93-3	BUTANONE,2-

P882-120056
Determination of a Range of Concern for Mobile Source Emissions of Ammonia
EPA, Ann Arbor, MI, OMS
R. J. Garbe
Aug 81, 34p EPA/AA/CTAB/PA 81-20, PC A03/MF A01

Abstract: This paper describes an effort by the Emission Control Technology Division of the EPA to establish a range of concern for ammonia (NH3) emissions from mobile sources. A methodology was developed in order to bracket a range of concern for various unregulated pollutants. This paper coordinates the efforts from two EPA contracts in order to use this methodology specifically for an evaluation of NH3. Mathematical models were previously designed or adjusted for various exposure scenarios (such as enclosed spaces, expressways, and street canyons) and were used to calculate the ambient air concentrations resulting from various mobile source NH3 emission factors. In conjunction with this, an NH3 health effects literature search was conducted to aid in the determination of the final range of concern. This search provides adequate evidence to support the chosen limits of the range.

DM	DISPERSION MODELING
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
7664-41-7	AMMONIA

PB82-120098
The Determination of a Range of Concern for Mobile Source Emissions of Hydrogen Cyanide.
EPA, Ann Arbor, MI, OMS
L. DeMeyer and R. Garbe
Aug 81, 39p, EPA/AA/CTAB/PA/81-3, PC A03/MF A01

Abstract: This report describes an effort by the Emission Control Technology Division of the EPA to establish a range of concern for hydrogen cyanide (HCN) emissions from mobile sources. A methodology was developed specifically for an evaluation of HCN. Mathematical models were used to calculate the ambient air contractions resulting from various mobile course HCN emission factors (grams/mile). In conjection with this, an HCN health effects literature search was conducted to aid in the determination of the final range of concern. The results of the available emission factor data indicate that HCN emissions are not likely to present a problem to public health. Vehicles equipped with a three-way catalyst operating under malfunction modes or low ambient temperatures, may make a greater contribution to any potential human exposure problem.

DM	DISPERSION MODELING
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
74-90-8	HYDROGEN CYANIDE

PB82-121336
Source Resolution of Polycyclic Aromatic Hydrocarbons in the Los Angeles Atmosphere: Application of a Chemical Species Balance Method with First Order Chemical Decay
EPA, Research Triangle Park, NC, ESRL
California University, Los Angeles
M.M. Duval, S.K. Friedlander
Sep 81, 65p, EPA-600/2-81-161, PC A04/MF A01

Abstract: The chemical mass balance method which was originally developed for source resolution of chemical elements was extended in this study to chemically reactive compounds in atmospheric aerosols. The basic theoretical equation was reformulated to incorporate atmospheric decay factors for reactive species. The method was tested with selected polycyclic aromatic hydrocarbons (PAH) using source emission data and atmospheric concentrations reported in the literature. Absolute atmospheric concentrations of coronene, benzo(a)pyrene, benzo(e)pyrene, benzo(ghi)pyrene, and anthanthrene measured at 13 sites in the Los Angeles basin were apportioned between automobile and refinery emission sources. Refinery emission patterns of PAH in the Los Angeles basin were computed from an analysis of auto emissions data and ambient data from a refinery area. Rates of atmospheric degradation of the PAH were calculated from an analysis of auto emission and ambient air data. Literature reports on major emissions of PAH from combustion sources were reviewed and evaluated.

AM	AMBIENT MONITORING
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
191-07-1	CORONENE
191-26-4	BENZO(GHI)PYRENE
192-97-2	BENZO(E)PYRENE
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
50-32-8	BENZO(A)PYRENE

PB82-127952
Inventory of Current Indoor Air Quality-Related Research
EPA, Cincinnati, OH., IERL
Department of Energy
C.B. Meyer, R. Hartley
Apr 81, 199p, EPA-600/7-81-119, PC A09/MF A01

Abstract: The Inventory lists a total of 171 current or recently completed projects relating to indoor air quality. It covers six specific areas of research: monitoring, instrumentation, health effects, control technology, risk assessment and pollutant characterization. It is cross-referenced to the following pollutant groups: radon, nitrogen oxides, carbon monoxide, formaldehyde, asbestos, respirable particulates, organics, tobacco smoke, odor, ozone, biological pollutants and multi-pollutant studies. Information provided for each project includes the name of the principal investigator, project sponsor, funding level and abstract. The Inventory is designed to be a useful tool for researchers in the field of indoor air pollution and for analysts, architects, builders and administrators who need to understand the problem, as well as possible solutions. Among other things, the document identifies experts who can advise the building industry on any indoor air quality topic under study.

AM	AMBIENT MONITORING
CL-ETS	ENVIRONMENTAL TOBACCO SMOKE
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
IA	INDOOR AIR
RA	RISK ASSESSMENT
10028-15-6	OZONE
10043-92-2	RADON
10102-44-0	NITROGEN DIOXIDE
1332-21-4	ASBESTOS
50-00-0	FORMALDEHYDE
630-08-0	CARBON MONOXIDE

PB82-128075
Formaldehyde and Other Aldehydes
National Academy of Sciences
May 81, 350p, ISBN-0-309-03146-X, PC A15/MF A01

Abstract: Although many of the aldehydes are minor components of the natural environment, it is now recognized the potential impact of some of them on the urban and indoor environments. Thus, there is a need to study their sources, concentrations, transport, and transformations and their effects on various environmental and biological systems. This report contains: Commercial Production, Properties, and Uses of the Aldehydes, Aldehyde Concentrations, Emission, and Environmental Generation and Transformation Reaction, Analytical Methods for the Determination of Aldehydes, Health Effects of Formaldehyde, Health Effects of Some Other Aldehydes, Effects of Aldehydes on Vegetation, and Effects of Aldehydes on Aquatic Organisms.

CL-ALDEHYD	ALDEHYDES
EA	EXPOSURE ASSESSMENT
EF	EMISSION FACTOR
HA	HEALTH ASSESSMENT
IA	INDOOR AIR
NAS	NATIONAL ACADEMY OF SCIENCES
50-00-0	FORMALDEHYDE

PB82-131566
Characterization of Exhaust Emissions from High Mileage Catalyst--Equipped Automobiles
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
L.R. Smith
Sep 81, 191p, EPA-460/3-81-024, PC A09/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from ten 1978 and 1979 high mileage catalyst equipped gasoline automobiles which have been driven for approximately 50,000 miles. The ten automobiles were evaluated as-received and after a tune-up to manufacturer's specifications, over the Light-Duty Federal Test Procedure (FTP) and the Highway Fuel Economy Driving Schedule (HFET). Exhaust constituents measured, in addition to the regulated emissions, include: aldehydes, particulates, sulfides, amines, metals, and several additional elements and compounds. Additional evaluations involved the measurement of the regulated emissions over four short-test procedures.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-SULFIDE	SULFIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
3711	MOTOR VEHICLES AND CAR BODIES

PB82-136847
Dioxins
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
M.P. Esposito, T.O. Tiernan, F.E. Dryden
Nov 80, 371p, EPA-600/2-80-197, PC A16/MF A01

Abstract: This report deals with a group of hazardous chemical compounds known as dioxins. The extreme toxicity of one of these chemicals, 2,3,7,8-tetrachlor-dioxin (2,3,7,8-TCDD), has been a concern of both scientific researchers and the public for many years. The sheer mass of published information that has resulted from this concern has created difficulties in assessing the overall scope of the dioxin problem. In this report, the voluminous data on 2,3,7,8-TCDD and other dioxins are summarized and assembled in a manner that allows comparison of related observations from many sources; thus, the report serves as a comprehensive guide in evaluation of the environmental hazards of dioxins. Sections 2 and 3 present detailed information on the chemistry and sources of dioxins. Various routes of formation of dioxins are discussed, and the possible presence of dioxins in basic organic chemicals and pesticides is addressed. Section 4 details the development of an analytical method for detecting part-per-trillion levels of dioxins in industrial wastes. Sections 5 through 8 discuss routes of human exposure to dioxins, including accounts of public and occupational exposure, and the health effects, environmental degradation, transport, and disposal of dioxins.

CL-DIOXIN	DIOXINS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
SA	SOURCE ASSESSMENT
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB82-142050
Survey of Cadmium Emission Sources
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Sep 81, 163p, EPA-450/3-81-013, PC A08/MF A01

Abstract: This document presents technical data used to support decision making on the need for listing cadmium under Section 108(a)(1), Section 112(b)(1)(A), or Section 111(b)(1)(A) as required by Section 122 of the Clean Air Act, as amended in 1977. Data are presented describing potential sources of cadmium emissions, control techniques used for cadmium emission control, estimated controlled and uncontrolled cadmium emissions, estimated ambient air quality, and compliance status. The results of special dispersion modeling are presented for incineration, interaction of smelters, and for interaction of sources in the New York City - New Jersey area.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
334	SECONDARY NONFERROUS METALS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB82-152174
Industrial Surface Coating: Appliances - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 193p, EPA-450/3-80-037A, PC A09/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB82-152851

A Review of Standards of Performance for New Stationary Sources - Coal Preparation Plants

EPA, Research Triangle Park, NC, OAQPS

TRW Energy Systems Group

Dec 80, 93p, EPA-450/3-80-022, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
11	ANTHRACITE MINING
111	ANTHRACITE MINING
1111	ANTHRACITE
12	BITUMINOUS COAL AND LIGNITE MINING
121	BITUMINOUS COAL AND LIGNITE MINING
1211	BITUMINOUS COAL AND LIGNITE

PB82-152869

Bulk Gasoline Terminals - Background Information for Proposed Standards

EPA, Research Triangle Park, NC, OAQPS

Dec 80, 323p, EPA-450/3-80-038A, PC A14/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS
5172	PETROLEUM PRODUCTS, NEC
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
5541	GASOLINE SERVICE STATIONS

PB82-154113
Emission Characterization of an Alcohol/Diesel-Pilot Fueled Compression-Ignition Engine and its Heavy-Duty Diesel Counterpart
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
T.L. Ullman and C.T. Hare
Aug 81, 239p, EPA-460/3-81-023, PC A11/MF A01

Abstract: This report describes results from emissions testing of a prototype diesel engine, developed by Volvo Truck Corporation of Sweden, which uses pilot injection of diesel fuel for compression ignition of alcohol fuel injection for main combustion. In addition to this dual-fuel engine, emission testing was also conducted on a heavy-duty diesel engine of similar design. The dual-fuel engine was characterized with methanol, ethanol and ethanol with 30 percent water (wt %). An oxidation catalyst was also used with methanol and ethanol. Emission characterization included regulated emissions (HC, CO, and NOX) along with total particulate, unburned alcohols, individual hydrocarbons, aldehydes, phenols, and odor. The particulate matter was characterized in terms of particle size distribution, sulfate content, C, H, S, metal content, and soluble organic fraction. The soluble organic fraction was studied by determining its elemental composition (C,H,S,N), boiling point distribution, BaP content, relative make-up of polar compounds, and bioactivity by Ames testing.

CL-ALDEHYD	ALDEHYDES
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
10102-44-0	NITROGEN DIOXIDE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
630-08-0	CARBON MONOXIDE
64-17-5	ETHANOL
67-56-1	METHANOL

PB82-160334
The Alkyl Benzenes
National Academy of Sciences
Jul 81, 395p, ISBN-0-309-03180-X, PC A17/MF A01

Abstract: Contents: Sources, uses, emissions, and controls; Physical and chemical properties; Techniques for measurement; Environmental disposition; Metabolism of alkyl benzenes; Biological effects in mammals: toluene, the xylenes, ethylbenzene, and cumene; Biological effects in mammals: styrene and styrene oxide; Biological effects of nonmammalian species; Summary and recommendations for future research.

CT	CONTROL TECHNOLOGY DOCUMENT
EF	EMISSION FACTOR
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
SA	SOURCE ASSESSMENT
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
108-88-3	TOLUENE
1330-20-7	XYLENE
20302-26-5	ETHYLBENZENE-D5
96-09-3	STYRENE OXIDE
98-82-8	CUMENE

PB82-163445
Toxicology and Carcinogenesis Studies of 2,3,7,8-Tetrachloro-dibenzo-p-Dioxin (CAS No. 1746-01-6)
NTP, Research Triangle Park, NC
Feb 82, 197p, NCI/NTP TR-209, PC A09/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB82-163684
Toxicology and Carcinogenesis Studies of Tetrachlorodibenzo-p Dioxin (CAS No. 1746-01-6)
NTP, Research Triangle Park, NC
Feb 82, 115p, NCI/NTP TR-201, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB82-164955
Toxicology and Carcinogenesis Studies of Selenium Sulfide (CAS No. 7446-34-6)
NTP, Research Triangle Park, NC
Aug 80, 113p, NCI/NTP TR-194, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
7446-34-6	SELENIUM SULFIDE

PB82-165291
Toxicology and Carcinogenesis Studies of Selenium Sulfide (CAS No. 7446-34-6)
NTP, Research Triangle Park, NC
1980, 54p, NCI/NTP TR-197, PC A04/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
7446-34-6	SELENIUM SULFIDE

PB82-180498
Formaldehyde and Other Aldehydes
National Academy of Sciences
1981, 340 p., PC A16/MF A01
ISBN 0-309-03146-X, $16.75

Abstract: This report was prepared at the request of the Environmental Protection Agency by the Committee on Aldehydes, which was appointed by the National Research Council in the Board of Toxicology and Environmental Health Hazards, Assembly of Life Sciences. The Clean Air Act requires that from time to time the Administrator of EPA evaluate the need for air-quality criteria on pollutants that may have adverse effects on man or the environment. This report is to be used by EPA in assessing the need for such criteria on some of the aldehydes. It is intended to identify and characterize the more important aldehydes that pollute the environment, the sources of their emission, their concentrations, their transformation and transport, their effects on the health of animals and humans, and their effects on the aquatic and terrestrial environments. It is not intended to recommend concentrations of polluting aldehydes for use in developing regulations, but rather to evaluate the available data for EPA to use in judging the need for regulatory strategies to control aldehyde pollution. It is hoped that wide dissemination of this report will inform physicians and other health professionals about the health effects of aldhydes and how they may be encountered at hazardoud concentrations in the environment.

CL-ALDEHYD	ALDEHYDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
50-00-0	FORMALDEHYDE

PB82-180563
Indoor Pollutants
EPA, Washington, DC, ORD
National Research Council
Mar 82, 555p, EPA-600/6-82-001, PC A24/MF A01

Abstract: This report is intended to characterize the quality of the indoor environment - primarily with respect to airborne pollutants, although others are discussed and to determine the potential adverse health effects of indoor pollutants. The charge was to review, compile, and appraise the available knowledge. The Committee has also identified the research needed for abatement of indoor pollution. 'Indoor' refers to the environments in homes, schools, public buildings, and similar spaces to which the public has acces; industrial working environments, however, are excluded from consideration here.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
IA	INDOOR AIR
NAS	NATIONAL ACADEMY OF SCIENCES

PB82-181710
Toxicology and Carcinogenesis Studies of 1,2-Dibromoethane (Ethylene Dibromide) (CAS No. 106-93-4)
NTP, Research Triangle Park, NC
Mar 82, 165p, NCI/NTP TR-210, PC A08/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
106-93-4	ETHYLENE DIBROMIDE

PB82-182031
Occupational Hazard Assessment-Criteria for Controlling Occupational Exposure to Cobalt
National Institute of Occupational Safety and Health
1982, PC A06/MF A01
NIOSH PUB No: 82-107, UNAVAIL NIOSH
GPO No: 017-033-00393-9, $5.00

Abstract Not Available

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-48-4	COBALT

PB82-183963
Extent of Exposure Survey of Monochlorobenzene
National Institute of Occupational Safety and Health
1981, 35 p., PC A03/MF A01
NIOSH PUB No: 81-105, AVAIL NIOSH

Abstract: Occupational exposures to monochlorobenzene (108-90-7) (MCB) were surveyed at three chemical companies. Twenty nine persons at company A were involved in the production of MCB; 12 persons in company B were regularly exposed and an additional 56 employees were exposed on an intermittent basis; and 12 hourly employees were regularly exposed in company C. Personal samples and air samples were taken for each job area at all three companies during all of the work shifts. In company A personal exposures to MCB ranged from less than 0.1 to 4.0 parts per million (ppm); in company B from 0.1 to 2.9 ppm; and in company C from below detectable to 1.90 ppm. Concentrations of MCB in all three companies were below current American Conference of Governmental Industrial Hygienists and OSHA permissible limits of 75 ppm MCB. The authors note that company B was operating at low capacity during the survey, and it is unknown if MCB exposure would remain below current permissible limits during full capacity operating conditions.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
108-90-7	MONOCHLOROBENZENE

PB82-184011
Toxicology and Carcinogenesis Studies of Di(2-Ethylhexyl) Phthalate (CAS No. 117-81-7)
NTP, Research Triangle Park, NC
Mar 82, 130p, NCI/NTP TR-217, PC A07/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
117-81-7	ETHYLHEXYLPHTHALATE,BIS,2-

PB82-186792
Health Assessment Document for Polycyclic Organic Matter
EPA, Research Triangle Park, NC, ECAO
Syracuse University Research Corp.
J. Santodonato, et al.
Feb 79, 492p, EPA-600/9-79-008, PC A21/MF A01

Abstract: The document responds to Section 122 of the Clean Air Act as Amended August 1977, which requires the Administrator to decide whether atmospheric emissions of polycyclic organic matter (POM) potentially endanger public health. This document reviews POM data on chemical and physical properties, atmospheric forms, atmospheric fate and transport, measurement techniques, ambient levels, toxicology, occupational health, and epidemiology. Polycyclic aromatic hydrocarbons (PAH's), such as the carcinogen benzo(a)pyrene (BaP), and their neutral nitrogen analogs are the two POM chemical groups occurring most frequently in ambient air. The major environmental sources of POM's appear to be the combustion or pyrolysis of materials containing carbon and hydrogen. There is general agreement that POM compounds are associated with suspended particulate matter from both mobile and stationary sources, principally respirable particles. Available monitoring data suggest that many POM compounds associated with particulate matter probably are stable in ambient air for several days. The major health concern over exposure to POM's is their carcinogenicity POM's gain ready access to the body's circulation either by inhalation, ingestion, or skin contact.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB82-190182
Toxicology and Carcinogenesis Studies of Caprolactam (CAS No. 105-60-2)
NTP, Research Triangle Park, NC
Mar 82, 131p, NCI/NTP TR-214, PC A07/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
105-60-2	CAPROLACTAM

PB82-196148
Feasibility of Developing Source Sampling Methods for Asbestos Emissions
EPA, Research Triangle Park, NC, ESRL
Battelle Columbus Labs
W. M. Henry, et al.
Apr 82, 70p, EPA-600/3-82-008, PC A04/MF A01

Abstract: The objective of this program was to determine the feasibility of developing methods for sampling asbestos in the emissions of major asbestos sources: (1) ore production and taconite production; (2) asbestos-cement production, (3) asbestos felt and paper production, and (4) the production of asbestos-containing friction materials. Potential sampling methods must provide samples compatible with the provisional analysis methods using electron microscopy (U.S. EPA Report No. 600/2-77-178). Two general criteria of source sampling methods were identified as: (1) the sampling method must be capable of collecting a representative sample and (2) the asbestos emissions must be collected in such a manner that they can be analyzed by the provisional analytical method. Concurrent investigations of potential emissions in the industries and of current knowledge of sampling fibers were undertaken to assess the feasibility of meeting the firt criterion. The industry survey revealed that asbestos emissions can be divided into two classes: stack and fugitive. With respect to the second criterion, it is not feasible to undertake a methods development program for strict compatibility with the recommended procedure of the provisional analytical method.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
1332-21-4	ASBESTOS

PB82-196841
Bulk Sample Analysis for Asbestos Content: Evaluation of the Tentative Method
EPA, Research Triangle Park, NC, EMSL
Research Triangle Inst.
E.P. Brantly, Jr., et al.
Apr 82, 136p, EPA-600/4-82-021, PC A07/MF A01

Abstract: The U.S. Environmental Protection Agency Asbestos-in-Schools Program was established in March 1979 to provide information and technical assistance to the public for addressing problems presented by asbestos-containing insulation materials in school buildings. Because there were no existing standard procedures for the qualitive and quantitative analysis of asbestos in bulk materials, the Office of Pesticides and Toxic Substances, Washington, DC, and the Environmental Monitoring Systems Laboratory, Research Triangle Park, NC, jointly sponsored an effort to produce a practical and objective analytical protocol. Draft procedures were written for the analysis of bulk samples by polarized light microscopy (PLM) and X-Ray powder diffraction (XRD). This report presents the results of the testing study and provides observations and preliminary characterization of the utility and operational parameters of the Tentative Method.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB82-200460
Phosphate Rock Plants - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 82, 48p, EPA-450/3-79-017B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK

PB82-201773
Determination of a Range of Concern for Mobile Source Emissions of Hydrogen Sulfide
EPA, Ann Arbor, MI, OMS
C. Harvey
Jan 83, 38p, EPA/AA/CTAB/PA/82-7, PC A03/MF A01

Abstract: This report describes an effort by the Emission Control Technology Division of the Environmental Protection Agency to establish a range of concern for hydrogen sulfide (H2S) emissions from mobile sources. Mathematical models were used to calculate the ambient air concentrations resulting from various mobile source hydrogen sulfide emission factors (grams/mile). In conjunction, with this, a literature search was conducted by Midwest Research Institute under contract to EPA to aid in the determination of the final range of concern. The results of this analysis provide a range of concern for ambient hydrogen sulfide concentrations of 0.03 mg/cu m to 14.0 mg/cu m. This corresponds to motor vehicle emission levels of from 10.5-4,900 mg/mile to 958.5-447,300 mg/mile on the road and 0.04-204 mg/min to 3.8-1,770 mg/min for garages, depending on the type of scenario chosen to represent public exposure. Under non-malfunction conditions or when the malfunction does not cause a rich mixture, high catalyst temperature and low exhaust space velocity, the resulting H2S emissions are negligible (below the range of concern for any scenario).

DM	DISPERSION MODELING
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
7783-06-4	HYDROGEN SULFIDE

PB82-202490
Lead-Acid Battery Manufacture - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 80, 59p, EPA-450/3-79-028B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
36	ELECTRIC AND ELECTRONIC EQUIPMENT
369	MISC. ELECTRICAL EQUIPMENT & SUPPLIES
3691	STORAGE BATTERIES

PB82-202573
Fossil Fuel Fired Industrial Boilers - Background Information. Volume 1: Chapters 1-9
EPA, Research Triangle Park, NC, OAQPS
Mar 82, 553p, EPA-450/3-82-006A, PC A24/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMANCE STANDARD

PB82-202581
Fossil Fuel Fired Industrial Boilers - Background Information. Volume 2: Appendices
EPA, Research Triangle Park, NC, OAQPS
Mar 82, 331p, EPA-450/3-82-006B, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMANCE STANDARD

PB82-203209
Nonfossil Fuel Fired Industrial Boilers: Background Information
EPA, Research Triangle Park, NC, OAQPS
Mar 82, 791p, EPA-450/3-82-007, PC A99/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA ENVIRONMENTAL PROTECTION AGENCY
NSPS NEW SOURCE PERFORMANCE STANDARD

PB82-212895
Workshop on Exposure to Environmental Agents, Their Metabolism, and Mechanisms of Toxicity: Research Needs
EPA, Washington, DC, ORD
Geomet Technologies, Inc.
Aug 81, 138p, PC A07/MF A01

Abstract: The report is the product of a workshop sponsored by the Task Force on Environmental Cancer and Heart and Lung Disease. It contains 72 recommendations for basic and applied environmental research, which were developed through a consensus of scientific experts from Government, industry and academia. Research needs are identified in the following areas: accessing Federal data systems for epidemiological research; improving analytical techniques for monitoring and accessing human exposures; understanding mechanisms of activation and detoxification of environmental pollutants in animals and humans; examining the interactions of environmental pollutants with macromolecules, such as DNA; and understanding the repair and replicative processes, and gene expression as possible common toxicological events in cancer and heart and lung disease.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT

PB82-217126
Fugitive Emission Sources of Organic Compounds - Additional Information on Emissions, Emission Reductions, and Costs
EPA, Research Triangle Park, NC, OAQPS
Apr 82, 258p, EPA-450/3-82-010, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS

PB82-221870
Risk and Decision Making: Perspectives and Research
National Academy of Sciences
Mar 82, 77p, PC A05/MF A01
Publication-on-demand, $10.00

Abstract: The report examines changing perceptions of risk, the apparent increased public concern with risk and the possible causes, offers a taxonomy of various risks, from self-hazardous behavior to risks generated by government policies, and discusses a variety of tactics for coping with these categories of risk. The ways in which risks are generated and coped with are outlined. The report divides risk analysis into two parts, assessment and evaluation, examines the respective roles of each, and the techniques for integrating them. There is considerable emphasis on the modalities within which the assessments of risks are done, including the role of scientists in that work as well as the usefulness of committees as a mechanism.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

PB82-225343
Asbestos-Containing Materials in School Buildings: Guidance for Asbestos Analytical Programs. Statistical Background Document
EPA, Washington, DC, OPTS
Research Triangle Inst.
D.L. Lucas, A.V. Rao, and T. Hartwell
Dec 80, 51p, EPA-560/13-80-017B, PC A04/MF A01

Abstract: This report presents detailed sampling procedures and laboratory quality assurance measures for bulk samples collected in school buildings. Statistical support for these procedures is given.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB82-225632
Toxicology and Carcinogenesis Studies of 1,2-Dibromo-3-Chloropropane (CAS No. 96-12-8)
NTP, Research Triangle Park, NC
Mar 82, 171p, NCI/NTP TR-206, PC A08/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
96-12-8	DIBROMOCHLOROPROPANE,1,2-,3-

PB82-225962
Asbestos-Containing Materials in School Buildings: A Guidance Document. Part 1
EPA, Washington, DC, OTS
Mar 79, 73p, EPA-560/1-82-002, PC A04/MF A01

Abstract: Recently there has been an increasing awareness of the significance of environmental factors in causing illness. The fibrous minerals known as asbestos, used in many different kinds of products and applications, have entered the environment in both occupational and nonoccupational settings. The Environmental Protection Agency (EPA) is concerned with the disease-causing potential of intermittent, lowlevel exposures that can occur in some school buildings from certain asbestos-containing materials. EPA has established a guidance program to inform States and local school officials of the possible health hazards associated with asbestos. EPA's guidance package contains two parts. This manual, which is Part 1 of the package, is written for school officials. Part 1 outlines steps that schools can take to conduct an asbestos control program.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS
52	BUILDING MATERIALS & GARDEN SUPPLIES
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB82-225970
Sprayed Asbestos-Containing Materials in Buildings: A Guidance Document. Part 2.
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
R.N. Sawyer, and C. M. Spooner
Jan 78, 119p, EPA-450/2-78-014, PC A06/MF A01

Abstract: This guidance document summarizes the available information on sprayed asbestos-containing materials in buildings. It describes actions that may be taken when a building owner knows or suspects that friable asbestos materials are present. Application of sealant coats and removal of asbestos materials are discussed.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB82-227372
Carcinogen Assessment Group's Final Report on Population Risk to Ambient Benzene Exposures
EPA, Research Triangle Park, NC, OAQPS
R. E. Albert
Jan 79, 46p, EPA-450/5-80-004, PC A03/MF A01

Abstract: This report is one of three reports which were prepared by Environmental Protection Agency to determine what regulatory action should be taken by EPA to control sources of atmospheric emissions of benzene. This report estimates from three epidemiological studies the leukemia risk associated with current general population exposures to benzene in the United States.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
71-43-2	BENZENE

PB82-228917
Literature Review of Personal Air Monitors for Potential Use In Ambient Air Monitoring of Organic Compounds
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
G.A. Lutz
Jun 82, 88p, EPA-600/4-82-048, PC A05/MF A01

Abstract: The open literature, Federal publications, industrial reports, and other sources published between 1975 and 1980 were reviewed for information relevant to personal air samplers potentially useful in sampling organic compounds at ambient levels (50-200 ppt). Seventy-one references which identify fifty-two groups involved in developing or marketing relevant instruments are cited. Four passive personal monitors and two active monitors developed for industrial hygiene levels are recommended for further testing and development for use at ambient levels. These monitors are DuPont's PRO-TEK G-AA; Abcor's GASBADGE; 3M's 3500 Organic Vapor Monitor; Real's Mini-Monitor; MDA's Accuhaler; and Bendix's BDX102. Laboratory tests are proposed in the arease of blank reduction/reproducibility, analytical methodology, and controlled atmosphere exposures. Following completion of laboratory tests, the most promising devices should be field tested to determine which monitors provide the most accurate and reliable data.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB82-230608
Field Tests of Industrial Coal Stoker Fired Boilers for Inorganic Trace Element and Polynuclear Aromatic Hydrocarbon Emissions
EPA, Research Triangle Park, NC, IERL
KVB, Inc.
J.O. Burlingame, et al.
Oct 81, 349p, EPA-600/7-81-167, PC A15/MF A01

Abstract: The report gives results of 23 tests for 21 polynuclear aromatic hydrocarbons (PAHs) and 74 inorganic trace elements in the effluent of 11 coal stoker fired boilers. The results were obtained from data gathered by analysis of the catch collected from the Source Assessment Sampling System (SASS) train, for collection of particulate and volatile matter in addition to gaseous samples. SASS tests were conducted in accordance with EPA Level 1 guidelines, which provide only preliminary emissions data, to help identify problem areas. In addition to test results, the report describes the facilities tested, coals fired, test equipment and procedures, analytical procedures involved for organic and inorganic analysis, and data reduction.

CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB82-230913
Development and Demonstration of Concepts for Improving Coke-Oven Door Seals
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs.
A.O. Hoffman, A.T. Hopper, and R.L. Paul
Apr 82, 112p, EPA-600/2-82-066, PC A06/MF A01

Abstract: The report discusses the design, laboratory scale tests, construction, and field tests of an improved metal-to-metal seal for coke-oven end doors. Basic features of the seal are: high-strength temperature-resistant steel capable of 3 times the deflection of current seals without permanent deformation; no backup springs and plungers and the attendant requirement for manual inservice adjustments; seal installed to conform to the jamb profile; seal lip height reduced to give 8 times the inplane flexibility; and compatibility with existing coke batteries and door handling machines.

CL-COE	COKE OVEN EMISSIONS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB82-230947
Ambient Perchloroethylene Levels Inside Coin-Operated Laundries with Drycleaning Machines on the Premises
EPA, Research Triangle Park, NC, EMSL
PEDCo-Environmental, Inc.
S.J. Howie and L.A. Elfers
Oct 81, 203 p, EPA-600/4-82-032, PC A10/MF A01

Abstract: In this study, ambient perchloroethylene (PERC) levels were measured inside and in the vicinity of six self serve laundries containing coin-type dry cleaning operations. Inside two of the laundries, evaluations of organic vapor monitoring badges were performed in addition to the basic monitoring effort. Special tests were conducted during this study to measure PERC emissions from dry cleaned clothing and to measure PERC levels in an apartment above one of the tested laundries.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING
127-18-4	TETRACHLOROETHYLENE
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB82-231325
Technical Assistance in Support of Permitting Activities for the Thermal Destruction of PCBs
EPA, Research Triangle Park, NC, IERL
GCA Corp.
R.G. Mcinnes
Oct 81, 78p, EPA-600/2-81-240, PC A05/MF A01

Abstract: The report describes phased efforts to identify, evaluate, and provide technical permitting assistance to utility boilers considering thermally destroying PCB-contaminated mineral oil. The project also required that State and Local Governments be provided information needed to air permitting of a PCB verification burn.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB82-234147/REB
Characterization of Diesel Emissions from Operation of a Light-Duty Diesel Vehicle on Alternate Source Diesel Fuels
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
B.B. Bykowski
Nov 81, 190p, EPA-460/3-82-002, PC A09/MF A01

Abstract: Several alternate source diesel test fuels were studied to note their effects on regulated and unregulated exhaust emissions from a 1980 Volkswagen Rabbit. Nine fuel blends were tested, including a No. 2 petroleum diesel as base, base plus coal-derived liquids (via SRC-II and EDS processes), shale oil diesel and jet fuel, and other blends of coal-derived liquids, shale oil liquids, and petroleum stocks. Analyses performed include gaseous hydrocarbons, CO, NOx, particulate mass, phenols, smoke, odor, Ames tests, BaP, and polarity by HPLC. Smoke and particulate increases were generally associated with use of coal-derived liquids.

CL-PHENOL	PHENOLS
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
10102-44-0	NITROGEN DIOXIDE
630-08-0	CARBON MONOXIDE

PB82-234618
Sampling for High-Molecular-Weight Organic Compounds in Power Plant Stack Gases
EPA, Research Triangle Park, NC, ESRL
Southern Research Institute
W. R. Dickson, H. C. Miller, W. J. Barrett
May 82, 50p, EPA-600/7-82-039, PC A03/MF A01

Abstract: The results of laboratory and field investigations of experimental sampling systems intended to collect high-molecular-weight organic compounds from flue gases in coal-fired power plants are presented. The most promising sampling device was a solid sorbent cartridge inserted directly into the flue gas stream and cooled to a temperature just above the dew point by a forced flow of external ambient air. Although certain sorbent materials were shown to be partially effective for the collection of vapors of polynuclear aromatic hydro- carbons at temperatures of 50 to 60C, no completely satisfactory sorbent was found. Ambersorb XE-340, a nonpoplar carbonaceous sorbent, was the most satisfactory of several organic and inorganic sorbent materials tried, but its usefulness was limited by the presence of contaminants that could not be removed. The simolicity of the sampling system and the results obtained suggest that continuing efforts should be made to find a better sorbent material.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB82-241860
PCB Disposal by Thermal Destruction
EPA, Dallas, TX, Region VI
Jun 81, 610p, EPA-906/9-82-003, PC A99/MF A01

Abstract: A report on the sampling, analysis, and consideration of risks and benefits associated with the incineration of polychlorinated biphenyls (PCBs) at two commercial facilities in Deer Park, Texas and El Dorado, Arkansas. Included are a summary, PCB incineration test reports, polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF) emission sampling reports, a PCDD and PCDF analytical chemistry report, air dispersion modeling results, an analysis of risks and benefits, and letters and conditions of approval.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
51207-31-9	TETRACHLORODIBENZOFURAN,2,3,7,8-
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB82-242256
Assessment of Human Exposures to Atmospheric Acrylonitrile
EPA, Research Triangle Park, NC, OAQPS
SRI International
B. E. Suta
Aug 79, 284p, PC A13/MF A01

Abstract: This report is one in a series that SRI International is providing for the U.S. Environmental Protection Agency to estimate the population- at-risk to selected pollutants. Primarily, this study has sought to estimate environmental exposure of the U.S. population to atmospheric acrylonitrile (AN) emissions. The principal atmospheric sources considered in this report are facilities that produce or that use it as a chemical intermediate. Many tables are included.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB82-242611
Primary Aluminum. Background Information: Proposed Amendments
EPA, Research Triangle Park, NC, OAQPS
Aug 78, 71p, EPA-450/2-78-025A, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB82-247594
Environmental Implications of Changes in the Brominated Chemicals Industry
EPA, Washington, DC, ORD
Winzler and Kelly
L.W. Margler
Apr 82, 148p, EPA-600/8-82-020, PC A07/MF A01

Abstract: In light of the large-scale changes occurring within the bromine-based chemicals industry, the U.S. Environmental Protection Agency commissioned a study to investigate the potential for adverse environmental effects that might result from such changes. In particular, EPA was interested in learning if the existing excess capacity to produce bromine and ethylene dibromide has or would stimulate the industry to seek alternative uses for bromine that could result in new environmental concerns. An extensive literature review was conduc-ted, followed by personal contacts with knowledgeable individuals and by independent analysis, with concentration on present and future markets, exposure potential, and risk assessment. The study indicates, in general, that the environmental effects resulting from changes in the industry are relatively minor or that the potential problems have already been recognized and are being addressed by EPA. However, several areas do require further attention: the brominated flame retardants industry; the effect of methyl bromide on stratospheric ozone; the lack of carcinogenicity and food-residue data for methyl bromide; the environmental effects of bromine chloride utilization; chemicals used for petroleum production; vinyl bromide risk assessment; and thallium bromide optical fibers.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
106-93-4	ETHYLENE DIBROMIDE
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
286	INDUSTRIAL ORGANIC CHEMICALS
7726-96-5	BROMINE

PB82-249244
Drinking Water and Health. Volume 4.
National Academy of Sciences
1982, 299 p., PC A14/MF A01
ISBN 0-309-03198-2, $16.50

Abstract: This volume focuses on chemical and biological quality associated with drinking water distribution systems and the health effects from exposure to selected drinking water contaminants. It discusses the toxicity of selected chemical contaminants in drinking water and evaluates data concerning both acute and chronic exposure to the selected chemicals. Descriptions of some of the contaminants update information provided in the first three volumes of the series and others provide the first full evaluation of the health effects of certain contaminants.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-RAD	RADIATION
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
1332-21-4	ASBESTOS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB82-250234
Human Population Exposures to Coke-Oven Atmospheric Emissions
EPA, Research Triangle Park, NC, OAQPS
SRI International
A. P. Carlin, J. D. Cirvello
Oct 78, 123p, PC A06/MF A01

Abstract: There is a substantial body of evidence, both direct and indirect, that the mixture that coke oven emissions represent is carcinogenic and toxic. Current U.S. Environmental Protection Agency (EPA) policy states that there is no zero risk level for carcinogens. To determine what regulatory action should be taken by EPA on atmospheric emissions of coke ovens, three reports have been prepared: (1) a health effects assessment, (2) a population exposure assessment and (3) a risk assessment document based on the data in the first two assessments. This document is the human population exposure assessment and presents estimates of the number of people in the general population of the United States exposed to atmospheric concentrations of coke ovens emissions. Estimates are provided of population exposures to ambient concentrations of benzo(a)pyrene (BaP) and benzene soluble organics (BSO) material caused by coke oven emissions. Illustrations and tables.

CL-COE	COKE OVEN EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
50-32-8	BENZO(A)PYRENE

PB82-257312
Tests of theIndustrial Source Complex (ISC) Dispersion Model at the Armco Middletown, Ohio Steel Mill
EPA, Research Triangle Park, NC, OAQPS
Cramer (H.E.) Co., Inc.
J.F. Bowers, A.J. Anderson, and W.R. Hargraves
Feb 82, 465p, EPA-450/4-83-006, PC A20/MF A01

Abstract: The primary purpose of the study described in this report was to test the performance of the gravitational settling/dry deposition of the Industrial Source Complex (ISC) Dispersion Model using the 1980 particulate air quality measurements made by Armco and EPA in the vicinity of the Armco Steel Mill at Middletown, Ohio, with the corresponding Armco emissions data. Statistical comparisons of calculated and observed concentrations, made following the procedures suggested by an AMS Workshop on Dispersion Model Performance, show that use of the ISC Model's gravitational settling/dry deposition option yields calculated by the ISC Model without using this option are representative of the concentrations that would be calculated using the modeling techniques recommended for application to particulate sources in the current (April 1978) EPA Guideline on Air Quality Models, the results of the study indicate that the ISC Model with the gravitational settling/dry deposition option is an improvement over the modeling techniques currently recommended for particulate sources.

CL-PM	PARTICULATE MATTER
DM	DISPERSION MODELING
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB82-257726
Asphalt Roofing Manufacturing Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 82, 68p, EPA-450/3-80-021B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
295	PAVING AND ROOFING MATERIALS
2952	ASPHALT FELTS AND COATINGS

PB82-258393
Toxicology and Carcinogenesis Studies of Vinylidene Chloride (CAS No. 75-35-4)
NTP, Research Triangle Park, NC
May 82, 167p, NCI/NTP TR-228, PC A08/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
75-35-4	DICHLOROETHYLENE,1,1-

PB82-262189
Sampling Air for Gaseous Organic Chemicals Using Solid Adsorbents Applications to Tenax
EPA, Research Triangle Park, NC, EMSL
F. Walling, et al.
Aug 82, 38p, EPA-600/4-82-059, PC A03/MF A01

Abstract: A simple input-output model for a two phase flow system with fixed bed was applied to Tenax adsorption of atmospheric contaminants. The model fit laboratory data acceptably and relationships with previous approaches were stated. Chromatographic retention volumes are used in this model which provides a means of scaling adsorbent bed dimensions and flow rates to preserve desired output characteristics. Suggestions are made about how to use the model for rational sampling design when quantitative information is needed. Practical limitations of field operations and fundamental knowledge and the need to evaluate every datum lead to practical suggestions for sampling. At least two samples collected simultaneously but at very different flow rates are suggested as necessary for quantitative work.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB82-922903
DDT and Its Metabolites in Carcinogenesis
National Cancer Institute
1982, 63 p., $5.25/MF $3.00

Abstract: Oncology Overviews are a service of the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, intended to facilitate and promote the exchange of information between cancer scientists by keeping them aware of literature related to their research being published by other laboratories throughout the world. Each Oncology Overview represents a survey of the literature associated with a selected area of cancer research. It contains abstracts of articles which have been selected and organized by researchers associated with the field. Contents: Experimental carcinogenicity studies with DDT; Experimental studies on the metabolic and toxicologic effects of DDT: Effects of DDT in vitro systems: Microsomal enzyme induction by DDT; Experimental studies of the metabolism and distribution of DDT; Epidemiological reports on the effects of exposure to DDT; Environmental occurence, public health issues and regulations concerning DDT; Reviews of DDT and its metabolites in carcinogenesis.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
50-29-3	DDT

PB83-101758
Current Intelligence Bulletin 36 - Silica Flour: Silicosis (Crystalline Silica).
National Institute of Occupational Safety and Health
1981, 11 p., PC A02/MF A01
NIOSH PUB No: 81-137, AVAIL NIOSH

Abstract: The relationship between silica (7631-86-9) flour exposure and development of silicosis is discussed. Development and characteristics of silicosis are described. Industrial uses for silica flour are reviewed and recommended exposure limits are provided. Published reports of silicosis among exposed workers are summarized, and the findings of studies conducted by NIOSH at two silica flour mills are reviewed. Recommendations are included for exposure monitoring, engineering controls, medical surveillance, work practices, personal protective equipment, worker education, and product labeling.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
14808-60-7	QUARTZ (SILICA DUST)

PB83-101766
Current Intelligence Bulletin 34-Formaldehyde: Evidence of Carcinogenicity.
National Institute of Occupational Safety and Health
1981, 15 p., PC A02/MF A01
NIOSH PUB No: 81-111, AVAIL NIOSH

Abstract: Information on the carcinogenicity of formaldehyde (50-00-0) is reviewed. The physical characteristics, and the methods of production and uses of formaldehyde are discussed together with estimates of the extent of industrial exposure. OSHA standards for occupational exposure, which mandate an 8-hour time weighted average of 3 parts per million (ppm) and a 5ppm ceiling, are summarized. Evidence for formaldehyde's toxicity, mutagenicity, and other health effects in humans and laboratory animals is evaluated. Occupations involving formaldehyde exposure, ranges of occupational exposure by industry, major formaldehyde manufacturers, and guidelines for reducing employee exposure, are listed. The author concludes that formaldehyde should be treated as a potential human carcinogen, and recommends that control measures to reduce employee exposures be instituted.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
50-00-0	FORMALDEHYDE

PB83-101774
Current Intelligence Bulletin 37 - Ethylene Dibromide (EDB)
National Institute of Occupational Safety and Health
1981, 16 p., PC A02/MF A01
NIOSH PUB No: 82-105, AVAIL NIOSH

Abstract: Information on the hazards of ethylene-dibromide (106-93-4) (EDB) exposure is reviewed. The production and use of EDB is discussed and exposure standards and guidelines proposed by OSHA, NIOSH, the American Conference of Governmental Industrial Hygienists, and by the California's Division of OSHA are included. Data also is provided on the magnitude of occupational EDB exposure. The results of carcinogenicity tests in laboratory animals, epidemiologic studies of exposed workers, and mutagenicity tests in Drosophila-melanogaster are summarized. The author concludes that EDB is a potential human carcinogen, and recommends a maximum workplace exposure limit of 0.13 part per million.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
106-93-4	ETHYLENE DIBROMIDE

PB83-105080
Current Intelligence Bulletin Reprints - Bulletins 1 thru 18 (1975 - 1977)
National Institute of Occupational Safety and Health
1978, 130 p., PC A06/MF A01
NIOSH PUB No: 78-127, AVAIL NIOSH

Abstract: The first 18 Current Intelligence Bulletins published since 1975 by NIOSH are presented. Information on chemical and physical properties, uses, toxicity, and recommended exposure limits is presented for chloroprene (126-99-8), trichloroethylene (79-01-6), ethylene-dibromide (106-93-4), chrome (7440-47-3) pigment, ethylene-dibromide (106-93-4), asbestos (1332-21-4), hexamethylphosphoric-triamide (680-31-9), polychlorinated-biphenyls (1336-36-3), 4,4-diaminodiphenylmethane (101-77-9), chloroform (67-66-3), radon (10043-92-2) daughters, dimethylcarbamoyl-chloride (79-44-7), diethylcarbamoylchloride (88-10-8), explosive azide (26628-22-8), inorganic arsenic (7440-38-2), nitorsamines in cutting fluids, precursors of beta-naphthylamine (91-59-8), 2-nitropropane (76-46-9), and acrylonitrile (107-13-1).

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
10043-92-2	RADON
101-77-9	METHYLENEDIANILINE,4,4'-
106-93-4	ETHYLENE DIBROMIDE
107-13-1	ACRYLONITRILE
126-99-8	CHLOROBUTADIENE,2-,1,3-
1332-21-4	ASBESTOS
1336-36-3	POLYCHLORINATED BIPHENYLS
26628-22-8	SODIUM AZIDE
67-66-3	CHLOROFORM
680-31-9	HEXAMETHYLPHOSPHORAMIDE
7440-38-2	ARSENIC AND COMPOUNDS AS AS
7440-47-3	CHROMIUM
76-46-9	NITROPROPANE,2-
79-01-6	TRICHLOROETHYLENE
79-44-7	DIMETHYLCARBAMYL CHLORIDE
88-10-8	CARBAMOYL CHLORIDE
91-59-8	NAPHTHYLAMINE,2-

PB83-113563
Stationary Internal Combustion Engines. Standards Support and Environmental Impact Statement. Volume I: Proposed Standards of Performance
EPA, Research Triangle Park, NC, OAQPS
Jan 79, 786p, EPA-450/2-78-125A, PC A99/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
35	MACHINERY, EXCEPT ELECTRICAL
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT

PB83-113746
Metallic Mineral Processing Plants - Background Information for Proposed Standards, Volume 1, Chapters 1-9
EPA, Research Triangle Park, NC, OAQPS
Aug 82, 488p, EPA-450/3-81-009A, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-METAL	METALLIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
10	METAL MINING
101	IRON ORES
102	COPPER ORES
103	LEAD AND ZINC ORES
104	GOLD AND SILVER ORES
105	BAUXITE AND OTHER ALUMINUM ORES
106	FERROALLOY ORES, EXCEPT VANADIUM
109	MISCELLANEOUS METAL ORES

PB83-114280
Metallic Mineral Processing Plants - Background Information for Proposed Standards. Volume 2: Appendices
EPA, Research Triangle Park, NC, OAQPS
Aug 82, 328p, EPA-450/3-81-009B, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-METAL	METALLIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
10	METAL MINING
101	IRON ORES
102	COPPER ORES
103	LEAD AND ZINC ORES
104	GOLD AND SILVER ORES
105	BAUXITE AND OTHER ALUMINUM ORES
106	FERROALLOY ORES, EXCEPT VANADIUM
109	MISCELLANEOUS METAL ORES

PB83-116830
Characterization of Exhaust Emissions from Methanol-and Gasoline-Fueled Automobiles.
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
L.R. Smith and C. M. Urban
Aug 82, 180p, EPA-460/3-82-004, PC A09/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from four light duty, sparkignited automobiles. Two of the automobiles, a 1981 Ford Escort and a 1981 Volkswagen Rabbit, were evaluated with gasoline; one of these was also operated on a gasoline-alcohol blend. The two other vehicles, also a 1981 Escort and a 1981 Rabbit, were evaluated with methanol fuel. The automobiles were evaluated over the Light Duty Federal Test Procedure (FTP) and the Highway Fuel Economy Driving Schedule (HFET). Additional evaluations with the methanol fueled Escort and Rabbit were conducted using promoted base metal catalysts, and the Excort was evaluated in a non-catalyst configuration. Exhaust constituents measured, in addition to the regulated emissions, include: aldehydes (including formaldehyde), particulates, individual hydrocarbons, methanol, ethanol, ammonia, cyanide, amines, nitrosames, and methyl nitrite. Additional exhaust evaluations included mass spectral and Ames bioassay analyses.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-NITROSO	NITROSO COMPOUNDS
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
1336-36-3	POLYCHLORINATED BIPHENYLS
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
57-12-5	CYANIDE
64-17-5	ETHANOL
67-56-1	METHANOL
7664-41-7	AMMONIA

PB83-118398
Toxicology and Carcinogenesis Studies of Butyl Benzyl Phthalate (CAS No. 85-68-7)
NTP, Research Triangle Park, NC
Aug 82, 102p, NCI/NTP TR-213, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
85-68-7	BUTYL BENZYL PHTHALATE

PB83-118760
Method for Measuring Carbon Fiber Emissions from Stationary Sources
EPA, Research Triangle Park, NC, ESRL
Battelle Columbus Labs
W.M. Henry, C.M. Melton, E.W. Schmidt
Aug 82, 43p, EPA-600/3-82-080, PC A03/MF A01

Abstract: Carbon fibers are highly conductive, lightweight and of small dimensions. When released as emissions from production, manufacturing, processing and disposal sources they may become airborne and disperse over wide areas. If they settle onto electronic or electrical components they can cause malfunctions and damage due to their high electrical conductivity. This research program was initiated to develop techniques to identify and measure carbon fiber concentrations emitted from manufacturing, processing, fabricating and incinerating sources. Its overall objective was to develop a measurement method useful to support possible emission regulatory actions. The method was tested on samples collected from various stationary emission sources and from a pilot-scale in-house incineration facility. The results of these emission measurements are reported.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
36	ELECTRIC AND ELECTRONIC EQUIPMENT
362	ELECTRICAL INDUSTRIAL APPARATUS
3624	CARBON AND GRAPHITE PRODUCTS

PB83-124867
Metal Coil Surface Coating Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 22p, EPA-450/3-80-035B, PC A02/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB83-124941
Industrial Surface Coating: Large Appliances - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 53p, EPA-450/3-80-037B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3479	METAL COATING AND ALLIED SERVICES

PB83-130294
Chemical Substances Designation. Volume I: Overview and Analysis (Toxic Intergration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 176p, EPA-560/TIIS-82-003, PC A09/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

P883-130302
Chemical Substances Designation. Volume II: EPA (Toxic Integration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 430p, EPA-560/TIIS-82-004, PC A19/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals, integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

P883-130310
Chemical Substances Designation. Volume 3: Other Federal Agencies (Toxic Integration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 282p, EPA-560/TIIS-82-005, PC A13/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals, integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB83-130328
Chemical Substances Designation. Volume 4: Designation Matrix (Toxic Integration Policy series)
EPA, Washington, DC, OPTS
ICF, Inc.
P. Bailey
Dec 81, 202p, EPA-560/TIIS-82-006, PC A10/MF A01

Abstract: This volume, part of a four volume study, examines EPA and other Federal agencies statutory and regulatory criteria for the designation of chemical substances. Volume I, a comparative analysis of the statutory authorities described in Volumes II and III, focuses on statutory purposes and goals, integration directives, the risks to be regulated, and the factors considered for designating and regulating chemical substances. The designation of chemical substances for regulation, hazard classifications and testing requirements are compared in the last section of Volume I. Volumes II and III review statutory provisions and regulations relating to the EPA and other Federal agency designations of chemical substances. The reviews focus on the criteria used to designate chemicals for regulation (e.g., role of economic and technological factors). The reviews specify which chemical substances are designated for regulation and each volume describes and analyzes the hazard classification systems established and corresponding test methods required by the regulations. Volume IV, the chemical designation matrix provides a listing of the substances designated by regulation under the statutes reviewed as they appear in the Code of Federal Regulations or the Federal Register (for proposed rules) as of January 1981.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-133058
Aromatic Amines: An Assessment of the Biological and Environmental Effects
National Academy of Sciences
1981, 324 p., PC A15/MF A01
Publication-on-demand, $25.00

Abstract: Aromatic amines and compounds related through metabolism are used widely in industry. As a result of such applications, they are also dispersed into the environment, thereby creating a potential for human exposure. Four aromatic amines are known to lead to urinary tract cancer in exposed humans, and some are also responsible for the induction of methemoglobinemia. Some other structurally similar amines are carcinogenic to one or more tissues in laboratory animals. This report summarizes the key information concerning the occurrence, analysis, and toxicology of the aromatic amines and then considers six specific amines in detail. The following substances were studied: Aniline, 4,4'-Methylenebis (2-Chloroaniline), 2,4-Diaminotoluene, trifluralin, p-Cresidine, and furazolidone. The following topics are covered: occurrence in the environment, general analysis, metabolism, carcinogenic potency and risk estimation, and epidemiology.

CL-AMINE	AMINES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
101-14-4	CURENE
120-71-8	CRESIDINE,P-
1582-09-8	TRIFLURALIN
62-53-3	ANILINE
95-51-2	CHLOROANALINE,O-
95-80-7	DIAMINOTOLUENE,2,4-

PB83-133066
Selected Aliphatic Amines and Related Compounds: An Assessment of the Biological and Environmental Effects
National Academy of Sciences
1981, 177p, PC A09/MF A01
Publication-on-demand, $16.00

Abstract: The greatest potential of aliphatic amines for the induction of acute and long-term toxic effects arises from their ability to be nitrosated to nitrosamines that are genotoxic with potential for mutagenicity, teratogenicity, and carcinogenicity, among other toxic effects. The report contains chapters on triethanolamine, morpholine, and 2-nitropropane. Triethanolamine is used in industry and in cosmetic preparations. It is also converted by nitrosating agents to N-nitrosodiethanolamine, which has been known for some time to induce cancer in rodents. Morpholine is an industrially important secondary amine that is nitrosated to N-nitrosomorpholine, which is carcinogenic in animals. 2-Nitropropane was selected because of its dispersion into the environment resulting from its use in paints and other coatings.

CL-AMINE	AMINES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
102-71-6	TRIETHANOLAMINE

PB83-134718
Measuring and Comparing the Cost Effectiveness of EPA Regulatory Efforts to Control Toxics-Related Health Risks. Volume I: Feasibility Study
EPA, Washington, DC, OPTS
ICF, Inc.
Mar 81, 152p, EPA-560/TIIS-82-007, PC A08/MF A01

Abstract: The Office of Toxics Integration of the Environmental Protection Agency undertook this study to examine the conceptual and practical limitations of the application of traditional cost-effectiveness methods to multi-media regulatory analysis and to determine the extent to which these methods may contribute to the integration of EPA's multiple program office controls on toxic chemicals. The goal in developing inter-media air, land, and water cost-effectiveness analysis is to allow comparative evaluation of the various combined alternatives for chemical risk reduction. The key analytical problem in developing an integrated approach is the difficulty of comparing the relative costs and benefits of regulatory proposals (or existing regulations) across media. Conventional benefit measures are usually not feasible to support a multi-media chemical control strategy. Benefit measures must reflect some positive change that is closer in the chain of effects to the ultimate receptors, e.g., units of exposure reduced or specific health risks reduced, than has generally been reflected in past regulations. The study also demonstrates the difficulties in comparing cost data between different Agency control programs.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-134726
Measuring and Comparing the Cost-Effectiveness of EPA Regulatory Efforts to Control Toxics-Related Health Risks. Volume II: Cost-Effectiveness Analysis of EPA Intermedia Priority Pollutants
EPA, Washington, DC, OPTS
ICF, Inc.
Mar 81, 174p, EPA-560/TIIS-82-008, PC A08/MF A01

Abstract: Volume II analyzes specific regulations in order to add substance to the concepts and principles discussed in Volume I and also to begin collection of baseline data which will provide a frame of reference for future analyses.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-136374
As Assessment of the Health Risks of Seven Pesticides Used for Termite Control
National Academy of Sciences
Aug 82, 82p, PC A05/MF A01
Publication-on-demand, $11.50

Abstract: Chlordane, heptachlor, aldrin, dieldrin, lindane, pentachlorophenol, and chlorpyrifos are registered for control of subterranean termites. There have been reports of the presence of some of these termiticides in the air of military housing long after application. Such findings have caused concern of possible adverse health effects among residents. The problem has been related primarily to housing built on poured concrete slabs with heating and cooling ducts in or below the slabs. In this report, the National Research Council's Committee on Toxicology evaluated the key toxicity information on the seven pesticides and compared the human-health risks associated with airborne exposure. The committee concluded that it could not determine a level of exposure to any of the termiticides below which there would be no biologic effects.

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
2921-88-2	CHLOROPYRIFOS
309-00-2	ALDRIN
58-89-9	GAMMA-HEXACHLORO-CYCLOHEXANE
60-57-1	DIELDRIN
76-44-8	HEPTACHLOR
87-86-5	PENTACHLOROPHENOL

PB83-136390
Surface Coating of Metal Furniture - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 50p, EPA-450/3-80-007B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
25	FURNITURE AND FIXTURES
251	HOUSEHOLD FURNITURE
2514	METAL HOUSEHOLD FURNITURE
252	OFFICE FURNITURE
2522	METAL OFFICE FURNITURE
253	PUBLIC BUILDING & RELATED FURNITURE
2531	PUBLIC BUILDING & RELATED FURNITURE
259	MISCELLANEOUS FURNITURE AND FIXTURES
2599	FURNITURE AND FIXTURES, NEC

P883-139535
Development of a Tunable Zeeman Spectrometer for Analysis of Toxic Organic Compounds
EPA, Research Triangle Park, NC, EMSL
California Univ., Berkeley
T. Hadeishi, et al.
Nov 82, 62p, EPA-600/4-82-067, PC A04/MA A01

Abstract: This program was undertaken to investigate the application of a new high resolution ultraviolet-visible absorption technique called tunable atomic line molecular spectroscopy (TALMS) to the detection of a variety of volatile organic molecules of concern to the Environmental Protection Agency. During the first phase of the study a prototype instrument was built and tested to demonstrate the detection of both small (i.e., less than four atoms) and complex molecules. During the second phase a more compact instrument was constructed for delivery to EPA, Research Triangle Park, NC before January, 1982. This second instrument was optimized for the detection of the more complex organic molecules benzene and chlorobenzene.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
108-90-7	MONOCHLOROBENZENE
71-43-2	BENZENE

P883-142612
Publication Rotogravure Printing Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 46p, EPA-450/3-80-031B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
27	PRINTING AND PUBLISHING
275	COMMERCIAL PRINTING
2754	COMMERCIAL PRINTING, GRAVURE

PB83-153015
Synthetic Fiber Production Facilities - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 82, 375p, EPA-450/3-82-011A, PC A16/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2823	CELLULOSIC MAN-MADE FIBERS
2824	ORGANIC FIBERS, NONCELLULOSIC

PB83-153528
Preliminary Study of Sources of Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
A.J. Miles, G.W. Brooks, L.E. Keller
Aug 82, 322p, EPA-450/5-82-005, PC A14/MF A01

Abstract: The purpose of this study was to analyze the severity of inorganic arsenic emissions from seven source categories including primary copper, lead, and zinc smelting, cotton ginning, glass manufacturing, and arsenic chemical manufacturing. The magnitude of arsenic emissions from each source category were quantified and control systems were investigated to determine baseline and estimated best control (EBC) for arsenic. The environmental, energy, and economic costs of implementing EBC, in source categories where it is not being used, were estimated. Two source categories, primary lead smelting and arsenic chemical manufacturing, were determined to have EBC in place as a result of compliance with existing regulations. The number of people exposed to arsenic from each of the source categories will be assessed separately by EPA using emissions and stack data generated in this study. The physical and chemical characteristics of arsenic and their impact on the control of arsenic emissions from the source categories were also examined.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
SA	SOURCE ASSESSMENT
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0724	COTTON GINNING
28	CHEMICALS AND ALLIED PRODUCTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3332	PRIMARY LEAD
3333	PRIMARY ZINC
3334	PRIMARY ALUMINUM
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB83-154609
Occupational Health Guidelines for Chemical Hazards
National Institute of Occupational Safety and Health
Jan 81, 1565p, PC A99/MF E10
NIOSH PUB No. 81-123, UNAVAIL NIOSH

Abstract: Occupational guidelines on 397 chemicals, minerals, and metals are compiled. Information on permissible exposure limits, chemicals and physical properties, and health hazards is summarized. Recommendations for medical surveillance, respiratory protection, personal protection, and sanitation practices for specific chemicals that are federally regulated are provided. The authors state that implementation of these recommendations will contribute to the development and maintenance of an effective occupational health program.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
RDG	REG DEVELOPMNT GUIDE

PB83-155580
Characterization of Air Particulate Material for Polycyclic Aromatic Compounds
EPA, Research Triangle Park, NC, EMSL
National Bureau of Standards
S.A. Wise, et al.
Jan 83, 59p, NBSIR-82-2595, PC A04/MF A01

Abstract: In studies to evaluate the potential health and ecological effects of atmospheric emissions, bioassays have been employed in conjunction with chemical characterization to correlate mutagenic and/or carcinogenic activity with chemical composition. The complexity of an air particulate extract necessitates the prefractionation of the mixture into suitable subfractures or chemical classes prior to chemical characterization and/or biological testing. The goal of this project was to evaluate such a fractionation scheme for air particulate material with respect to chemical characterization of the various fractions with particular emphasis on the identification of polycyclic aromatic hydrocarbons (PAH). In this study the authors have used three chromatographic approaches to separate, identify, and quantify the complex mixture of PAH extracted from SRM 1649 (Urban Dust/Organics): (1) capillary GC, (2) LC with selective fluorescence detection, and (3) multidimensional chromatographic techniques.

AM	AMBIENT MONITORING
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB83-156935
Measurements of Hazardous Organic Chemicals in the Ambient Atmosphere
EPA, Research Triangle Park, NC, ESRL
SRI International
H.B. Singh, et al.
Jan 83, 99p, EPA-600/3-83-002, PC A05/MF A01

Abstract: Analytical methods were refined and applied to the ambient analysis of 44 organic chemicals, many of which are bacterial mutagens or suspected carcinogens. On-site field collection programs, based on single site studies of 9 to 11 days duration each, were conducted in 10 U.S. cities. Field studies were performed with an instrumented mobile laboratory. A round-the-clock measurement schedule was followed at all sites. The field measurements allowed a determination of atmospheric concentrations, variabilities, and mean diurnal behaviors of the chemicals. The data analyzed relative to theoretically estimated removal rates. Typical diurnal profiles show highest concentrations of the primary pollutants during night time or early morning hours, with minimum concentrations in the afternoon hours. Chemistry plays only a nominal role in defining this diurnal behavior in most cases. Except for aromatic hydrocarbons and aldehydes, average concentrations of the measured species were in the 0- to 5-ppb range. The average concentration range observed for aromatics and aldehydes was 0- to 20-ppb.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB83-157743
VOC (Volatile Organic Compounds) Fugitive Emissions in Petroleum Refining Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 82, 282p, EPA-450/3-81-015A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB83-163543
Rubber Tire Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 81, 339p, EPA-450/3-81-008A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
3011	TIRES AND INNER TUBES

PB83-166488
Revised Standards for Basic Oxygen Process Furnaces: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 82, 381p, EPA-450/3-82-005A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB83-169136
Flexible Vinyl Coating and Printing Operations - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jan 83, 273p, EPA-450/3-81-016A, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
285	PAINTS AND ALLIED PRODUCTS
2851	PAINTS AND ALLIED PRODUCTS

PB83-174268
Animals as Monitors of Environmental Pollutants
National Academy of Sciences
1979, 436p, PC A19/M A01
ISBN 0-309-02871-X, $21.95

Abstract: The report is on the Symposium on Pathobiology of Environmental Pollutants: Animal Models and Wildlife as Monitors. The deleterious effect of pollution on humans and other animals living in highly industrialized urban areas is well recognized and documented whereas there have been fewer studies on the impact of pollution on wildlife. The symposium was organized in an effort to correct this deficiency and had the following goals: (1) to determine the extent to which environmental pollution can be documented in wildlife; (2) to provide a common forum for pathologists, wildlife biologists, and ecologists, who are studying environmental pollution from different perspectives; (3) to develop an informational and bibliographic resource on this important aspect of animal biology; and (4) to generate information that may be useful for legislators involved in fashioning contemporary policy decisions concerning the control of environmental pollution. Areas covered include aquatic pollutants, heavy metals, air pollution, fluoride, and pesticide toxicology.

CL-METAL	METALLIC COMPOUNDS
CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
16984-48-8	FLUORIDES

PB83-176719
Occupational Exposure to Leptophos and Other Chemicals
National Institute of Occupational Safety and Health
1978, 155 p., PC A08/MF A01
NIOSH PUB No: 78-136, UNAVAIL NIOSH
GPO No: 017-033-00287-8, $6.00

Abstract: This publication reports the medical findings regarding the health status of the workers and the results of a reproductive survey of wives of current and former Velsicol Chemical Co. workers in Bayport, Texas. The difficulty in establishing causal relationships when workers are occupationally exposed to multiple chemicals is also discussed. Also included in this report is a special case study evaluation of Velsicol workers allegedly chemically poisoned and previously diagnosed as experiencing severe neurological problems. Some of these workers were examined during this study and the question of permanent damage was considered in relation to their current health status.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
21609-90-5	PHOSPHONOTHIOIC ACID
28	CHEMICALS AND ALLIED PRODUCTS

PB83-177659
Methods for Assessing Exposure to Windblown Particulates
EPA, Washington, D.C., ORD
Dynamac Corp.
Mar 83., 65p, EPA-600/4-83-007, PC A04/MF A01

Abstract: This report reviews and evaluates methods for estimating airborne concentrations of particulates originating from waste disposal sites or similar areas over which toxic materials have been intentionally or inadvertently deposited. The purpose of the work is to identify a model (or models) that can be used to estimate human exposures to windblown toxic particulates from contaminated areas. If subsequent use of these preliminary models indicates serious exposure can occur to toxic particulates from hazardous waste sites, then emission rate measurements from toxic waste disposal sites are recommended for the development of more accurate airborne particulate models.

CL-PM	PARTICULATE MATTER
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB83-181263
Chloroform, Carbon Tetrachloride, and Other Halomethanes: An Environmental Assessment
National Academy of Sciences
1978, 309p, ISBN-0-309-02763-2, PC A14/MF A01

Abstract: This study assesses the scientific and technical information available on a class of potential multimedia environmental pollutants, the nonfluorinated halomethanes. This class of compounds includes the chlorinated, brominated, and iodinated methanes, and a few compounds containing two different halogens, such as bromodichloromethane. Of these compounds, the report considers chloroform and carbon tetrachloride in the greatest detail, primarily because the data available on these chemicals are more extensive than on other halomethanes, and they have been shown to be carcinogenic when administered in high doses to test animals.

CL-HALOME	HALOMETHANES
EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM

PB83-181271
Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents. Volume 1: Anticholinesterases and Anticholinergics
National Academy of Sciences
Jun 82, 292p, PC A13/MF A01
Publication-on-demand, $23.50

Abstract: The Department of the Army asked the National Academy of Science to conduct a study of the possible chronic adverse health effects on servicemen of experimental exposure to various chemicals at U.S. Army Laboratories at Edgewood, Maryland, in about 1958-1975. The Edgewood tests were conducted to learn how specific chemicals may affect humans. Some 6,720 soldiers took part in the program; 254 chemicals were administered by various routes. Chemicals were tested for various military applications. The charge to the two panels was to determine whether, on the basis of the data available, it is possible to demonstrate the likelihood of long-term health effects or delayed sequelae and, if so, whether the involved chemicals, as tested, were likely to produce long-term health effects or delayed sequelae. The report is the first of two on the Edgewood tests. It presents the two panels' tentative conclusions which are based on a review of data obtained from Edgewood, on mortality data organized by the NRC Medical Follow-up Agency, and on separate discussions and papers generated by Panel members.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY

PB83-181289
Identifying and Estimating the Genetic Impact of Chemical Mutagens
National Academy of Sciences
1983, 295 p., PC A14/MF A01
ISBN 0-309-03345-4, $11.50

Abstract: Beginning with a primer on genetics, mutation, mutagens, and the implications of mutagenesis, this useful volume describes a two-tier system of inexpensive, short-term sensitive mutagenicity tests that can be widely applied to identify substances that may represent mutagenic hazard. Suggestions for further research also are included.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

P883-187468
User's Guide for the Automated Inhalation Exposure Methodology (IEM).
EPA, Cincinnati, OH, IERL
Oak Ridge National Lab
F.R. O'Donnell, et al.
Apr 83, 115p, EPA-600/2-83-029, PC A06/MF A01

Abstract: The Inhalation Exposure Methodology (IEM) is a system of computer programs that estimates atmospheric transport of and population exposure to airborne pollutants. This paper discusses the capabilities of IEM and gives detailed instructions for executing the automated, interactive version of IEM that is installed on the IBM system at the National Computer Center, Research Triangle Park, North Carolina. This version uses eight execute (EXEC) programs to assist the user in preparing needed input data files, to direct the flow of input and output data, and to submit the computer programs for execution. Wind speed and direction data contained in Stability Array (STAR) meteorological data files are accessed, prepared, and input to the Industrial Source Complex, Long Term (ISCLT) Disperson Model. This model is then employed to calculate annual-average ground-level air concentrations of pollutants at specified points. These concentrations and site-specific population data are combined by the Concentration-Exposure Program (CONEX) to provide estimates of population exposures to pollutants. All steps required to execute the interactive version of IEM are explained and demonstrated with the aid of a sample problem.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

P883-191403
Volatile Organic Compounds in the Ambient Atmosphere of the New Jersey, New York Area
EPA, Research Triangle Park, NC, ESRL
New Jersey Inst. of Tech, Newark
J.W. Bozzelli, B.B. Kebbekus
Apr 83, 249p, EPA-600/3-83-022, PC A11/MF A01

Abstract: From 1979 through 1981 data were collected on selected volatile organics in the ambient atmosphere of New Jersey and New York. The sites selected included urban, suburban rural, and industrial areas: Newark, Rutherford, South Amboy, Elizabeth, Camden and Batsto Village in New Jersey. In addition, studies were carried out on the sample trapping methodology, as well as on the correlation of the data obtained with wind direction during sampling. Generally, the aromatic compounds, especially benzene, toluene and p-xylene were the most common pollutants found and were usually the most concentrated of the species determined. Levels were usually in the low parts per billion range.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
108-88-3	TOLUENE
1330-20-7	XYLENE
71-43-2	BENZENE

PB83-192385
Background Information Document Proposed Standards for Radionuclides
EPA, Washington, DC, ORP
Mar 83, 390p, EPA-520/1-83-001, PC A17/MF A01

Abstract: This report presents background information that supports the Environmental Protection Agency's (EPA's) proposed emission standards for radionuclides pursuant to Section 112 of the Clean Air Act. An analysis of public health impacts from the following source categories is presented: (1) Department of Energy (DOE) facilities, (2) Nuclear Regulatory Commission (NRC)-licensed and non-DOE Federal facilities, (3) coal-fired utility and industrial boilers, (4) uranium mines, (5) phosphate industry facilities, and (6) mineral extraction industry facilities. For each source category, the following information is presented: (1) a general description of the source category, (2) a brief description of the processes that lead to the emission of radionuclides into air, (3) a summary of emissions data, and (4) estimates of radiation doses and health risks to both individuals and populations.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB83-192815
Study of Selected State and Local Air Toxics Control Strategies
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
A.S. Pelland, S.J. Call, G.E. Wilkins
Oct 82, 230p, EPA-450/5-82-006, PC A11/MF A01

Abstract: This project was initiated with the objective of providing a report describing state and local programs for controlling toxic air pollutants. The report is designed to serve as a resource for agencies who wish to develop air toxics control strategies. Studies were made of air toxics programs in Michigan, New Jersey, New York, Kentucky, Texas, California, Illinois, and Philadelphia. The report consists of a summary comparing the eight programs and a detailed description of each program. Development of all eight programs was initiated as a result of the recognition of potential adverse health effects resulting from exposure to toxic substances in the ambient air. The programs studied have four general functions in common: (1) air toxics control implemented via existing criteria pollutant permitting systems, (2) collection of information on substances that will be emitted from sources being permitted, (3) determination of the quantity of toxic emissions allowable, and (4) conservation of agency resources in order to focus efforts on the most hazardous emissions of air toxics.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

P883-195503
Volatile Organic Chemicals in the Atmosphere: An Assessment of Available Data
EPA, Research Triangle Park, NC, ESRL
SRI International
R. Brodzinsky, H.B. Singh
Apr 83, 207p, EPA-600/3-83-027A, PC A10/MF A01
For system on magnetic tape, see P883-195511

Abstract: Significant quantities of organic chemicals are released into the ambient environment as a necessary outcome of day-to-day human activities. In recent years, it has become evident that many of these chemicals are toxic at concentrations significantly higher than those found in the ambient atmosphere. The present study is designed to focus on the abundance of gaseous organic chemicals in the ambient environment with special emphasis on those that are or may be hazardous. The term "hazardous organic chemicals" (HOCs) used here is not intended to imply that a proven human health hazard exists. In most cases toxicity studies are incomplete and entail extrapolation of animal data to humans. Over the years many studies have been conducted to characterize the concentrations of a wide range of potentially hazardous gaseous organic chemicals. This study, for the U.S. Environmental Protection Agency (EPA), was an attempt to study their usefulness and to integrate them into a useful and cohesive document with a single, coherent data base that would readily indicate: Trace chemicals measured, Locations and times of HOC measurements, Typical concentrations of the individual HOCs, and Data quality and representativeness.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

P883-195511
Volatile Organic Chemicals in the Atmosphere: An Assessment of Available Data
EPA, Research Triangle Park, NC, ESRL
R. Brodzinsky, H. B. Singh
Mar 83, Mag tape, EPA 600/3-83-027B, PC (Data tape. Contact NTIS for price)

Abstract: Significant quantities of organic chemicals are released into the ambient environment as a necessary outcome of day-to-day human activities. In recent years, it has become evident that many of these chemicals are toxic at concentrations significantly higher than those found in the ambient atmosphere. The present study is designed to focus on the abundance of gaseous organic chemicals in the ambient environment with special emphasis on those that are or may be hazardous. The term "hazardous organic chemicals" (HOCs) used here is not intended to imply that a proven human health hazard exists. In most cases toxicity studies are incomplete and entail extrapolation of animal data to humans. Over the years many studies have been conducted to characterize the concentrations of a wide range of potentially hazardous gaseous organic chemicals. This study, for the U.S. Environmental Protection Agency (EPA), was an attempt to study their usefulness and to integrate them into a useful and cohesive document with a single, coherent data base that would readily indicate: Trace chemicals measured, Locations and times of HOC measurements, Typical concentrations of the individual HOCs, and Data quality and representativeness.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB83-196154
Ambient Acrylonitrile Levels Near Major Acrylonitrile Production and Use Facilities
EPA, Research Triangle Park, NC, EMSL
PEDCo-Environmental, Inc.
S. J. Howie, E. W. Koesters
Apr 83, 154p, EPA-600/4-83-016, PC A08/MF A01

Abstract: In this study, ambient acrylonitrile (AN) levels were measured in the vicinity of two major AN user facilities and two major AN production facilities. Approximately 100 duplicate air samples were collected on charcoal sorption tubes at different locations at or beyond the fenceline of each plant and analyzed by gas chromatography. The data obtained showed a definite presence of AN downwind of each plant. The levels found, which varied from a high of 130 parts per billion (ppb) to trace amounts (below 2.5 ppb) varied considerably depending on the date, the sample location, and the plant tested. The data shows higher levels of AN near use facilities than near production facilities, but factors such as distance from potential AN sources to sampling points may have influenced the results.

AM	AMBIENT MONITORING
107-13-1	ACRYLONITRILE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB83-199190
Industrial Process Profiles for Environmental Use: Chapter 30. The Electronic Component Manufacturing Industry
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
Apr 83, 235p, EPA-600/2-83-033, PC A11/MF A01

Abstract: The catalog of Industrial Process Profiles for Environmental Use was developed as an aid in defining the environmental impacts of industrial activity in the United States. Entries for each industry are in consistent format and form separate chapters of the study. Each chapter gives a general overview of the industry followed by process description and flow diagrams. Within each process description, available data on input materials, operating parameters, utility requirements, and waste streams are summarized. Appendices include related data such as company listing, raw material and production data, and atomospheric emissions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
36	ELECTRIC AND ELECTRONIC EQUIPMENT

PB83-200824
Toxicology and Carcinogenesis Studies of Diallyl Phthalate (CAS No. 131-17-9)
NTP, Research Triangle Park, NC
Apr 83, 93p, NCI/NTP TR-242, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
131-17-9	DIALLYL PHTHALATE

PB83-201194
Toxicology and Carcinogenesis Studies of L-Ascorbic Acid (CAS No. 50-81-7)
NTP, Research Triangle Park, NC
Mar 83, 175p, NCI/NTP TR-247, PC A08/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
50-81-7	ASCORBIC ACID,L-

PB83-204107
Nitrates: An Environmental Assessment
National Academy of Sciences
1978, 733 p., PC A99/MF E04
ISBN 0-309-02785-3, $16.75

Abstract: This report concentrates on some specific environmental issues related to nitrates, including, impacts of nitrates on human health, ecological effects of nitrates, and potential depletion of the stratospheric ozone layer by human activities that fix nitrogen, and subsequent effects of such depletion of ozone on man, ecosystems, and climate.

CL-NITRATE	NITRATES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

PB83-212043

Ohio River Valley Study. Sites, Methods, Data Summary for 1980.
Volume 1: Main Report
EPA, Research Triangle Park, NC, ESRL
Mead Technology Labs.
R. W. Shaw, R. J. Paur, T. Royal
May 83, 104p, EPA-600/3-83-044A, PC A06/MF A01

Abstract: The Ohio River Valley Study was initiated to gather air quality data at sites representative of regional conditions in an area where current coal usage and projected increases are exceptionally large. These data were intended for use in developing source apportionment calculations to attempt to identify species contributing to fine and coarse particle mass and to identify the major pollution sources responsible for these ambient particles. Special emphasis was also directed to chemical and physical analysis of the aerosols and gases to estimate the impact of emissions from coal-fired power plants on air quality at these Ohio River Valley monitoring sites. This report describes procedures for site location and for station preparation, operation, and periodic audits. Data summaries are presented for the period May through December 1980.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB83-212050

Ohio River Valley Study. Sites, Methods, Data Summary for 1980.
Volume 2: Appendices
EPA, Research Triangle Park, NC, ESRL
Mead Technology Labs
R. W. Shaw, R. J. Paur, T. Royal
May 83, 361p, EPA-600/3-83-044B, PC A16/MF A01

Abstract: The Ohio River Valley Study was initiated to gather air quality data at sites representative of regional conditions in an area where current coal usage and projected increases are exceptionally large. This report describes procedures for site location and for station preparation, operation, and periodic audits. Data summaries are presented for the period May through December 1980. Measurements included atmospheric concentrations of nitrogen oxides, sulfur dioxide, ozone, and peroxyacetyl nitrate; local meteorology; aerosol mass and composition; total suspended particulate; and precipitation. Special analysis for speciation of sulfur and aerosols began in December 1980. Measurements of nitric acid and ammonia were made during the summer of 1981; results will be presented in a subsequent report.

AM	AMBIENT MONITORING
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
10028-15-6	OZONE
10102-44-0	NITROGEN DIOXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB83-213843
Chemical Selection Methods: An Annotated Bibliography - Second Edition (Toxics Integration Information Series)
EPA, Washington, DC, OPTS
Tracor JITCO, Inc.
D.E. Meyer, V.L. Halpin
Mar 83, 63p, EPA-560/TIIS-83-003, PC A04/MF A01

Abstract: Persons interested in the control of toxic chemicals have examined and are examining methods to select chemicals of concern from the universe of chemical substances. Chemical selection refers to such activities as priority-setting, ranking, indexing, and sorting. These efforts have included the development of various systematic selection methods, such as scoring systems. This annotated bibliography is intended to provide brief summaries of a variety of chemical selection methods.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB83-214551
Field Validation of EPA (Environmental Protection Agency) Reference Method 23
EPA, Research Triangle Park, NC, EMSL
Scott Environmental Technology, Inc.
B. Bradd
Jun 83, 53p, EPA-600/4-83-024, PC A04/MF A01

Abstract: The accuracy and precision of U.S. Environmental Protection Agency Reference Method 23 was evaulated at a trichloroethylene degreasing facility and an ethylene dichloride plant. The method consists of a procedure for obtaining an integrated sample followed by gas chromatographic analysis. This study identified a number of conditions such as sunlight and sample volume that may affect the performance of the Method. A paired sampling technique was employed to obtain identical samples, from which the precision and variable interactions could be determined. Certain results fell outside the range of acceptable precision, especially when mylar bags were employed. Modifications to the method are suggested that specify that only Tedlar bags be used for sampling, that incorporate an on-site technique for leak detection, and that discontinue the procedure for moisture removal. With these modifications, Reference Method 23 was fully validated as acceptable for field use.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
79-01-6	TRICHLOROETHYLENE

PB83-215657
Hazardous Air Pollutant Prioritization System (HAPPS)
EPA, Research Triangle Park, NC, OAQPS
Argonne National Lab
A. E. Smith, D. J. Fingleton
Oct 82, 99p, EPA-450/5-82-008, PC A05/MF A01

Abstract: This report presents a preliminary screening technology by which a large number of potentially hazardous compounds can be numerically ranked using readily available information on health effects and release to the ambient air. Factors considered are oncongenicity, mutagenicity, reproduction and developmental toxicity, acute lethality, effects other than acute lethality, production volume, vapor pressure, bioaccumulation and existing standards.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB83-216366
Unregulated Emissions for Vehicles Operated under Low Speed Conditions
Southwest Research Inst.
L. R. Smith
May 83, 155p EPA-460/3-83-006, PC A08/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from six automobiles with various emission control systems at idle and low speed operation. The automobiles were evaluated at manufacturer's specifications and under malfunction operation. Exhaust emission constituents measured, in addition to the currently regulated emissions, include: sulfates, aldehydes and ketones, cyanide, hydrogen sulfide, and ammonia.

CL-ALDEHYD	ALDEHYDES
CL-SULFATE	SULFATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
7664-41-7	AMMONIA
7783-06-4	HYDROGEN SULFIDE

PB83-216580
Filter Extraction Procedures and Results for Various EPA/ECTD (Environmental Protection Agency/Emission Control Technology Division) Particulate Samples
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
M.A. Warner
Aug 82, 28p, EPA-460/3-82-008, PC A03/MF A01

Abstract: This report describes filter extractions and benzo (a) pyrene analyses performed for the Emission Control Technology Division of the Environmental Protection Agency. Pallflex filters measuring 20x20 inches were soxhlet-extracted in methylene chloride to remove organic soluble material. Some of the extracts were analyzed for benzo (a) pyrene, and some underwent Ames bioassay. Percent extractables and benzo (a) pyrene concentrations in the extracts are reported. Part of the effort also went into splitting and recombing extracts with the necessary extra drying and weighing steps.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
TT	TOXICITY TESTING
50-32-8	BENZO(A)PYRENE

PB83-218206
Toxicology and Carcinogenesis Studies of 1,1,1,2-Tetrachloroethane (CAS No. 630-20-6)
NTP, Research Triangle Park, NC
May 83, 144p, NCI/NTP TR-237, PC A07/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
630-20-6	TETRACHLOROETHANE,1,1,1,2-

PB83-226514
Screening Air Samples for Polynuclear Aromatic Compounds: A Field Study
EPA, Research Triangle Park, NC, EMSL
Oak Ridge National Lab
T. Vo-Dinh, et al.
1983, 17p, EPA-600/D-83-068, PC A02/MF A01

Abstract: The use of simple and cost-effective luminescence techniques for screening air particulate samples is described. Two analytical methods, synchronous luminescence and room temperature phosphorescence, are employed to monitor the content of polynuclear aromatic species in air particulate extracts collected at a wood-burning community. The validity and efficacy of this cost-effective screening approach are demonstrated via comparison of the screening data with results obtained by detailed gas chromatography/mass spectrometry analysis.

AM	AMBIENT MONITORING
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB83-231357
Personal Exposure to Volatile Organics and Other Compounds Indoors and Outdoors - The TEAM (Total Exposure Assessment Methodology) Study
EPA, Washington, DC, OMTS
Research Triangle Inst.
L,A. Wallace, et al
Jul 83, 35p, EPA-600/D-83-082, PC A03/MF A01

Abstract: The major objective of this study is to develop and field test a methodology for measuring individual human exposure to toxic substances. A secondary objective is to develop methods for estimating body burden with the use of biological measurements. All significant pathways of exposure are addressed. In Phase 1 of the study, sampling and analytical protocols were tested for volatile organic compounds, organochlorine pesticides, metals, and polyaromatic hydrocarbons. In Phase 2, exposure through air and drinking water and excretion rates through inhaled breath were measured for a statistically valid sample population. It was determined that personal air median concentration ranged from 40 to 320% higher than outdoor fixed air concentrations. Correlations between personal and outdoor samples were poor. It was concluded that personal air, indoor air, or breath measurements are far superior to outdoor measurements for estimating exposure. The study is currently enter-ing its third phase.

AM	AMBIENT MONITORING
CL-METAL	METALLIC COMPOUNDS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-PEST	PESTICIDES
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
1336-36-3	POLYCHLORINATED BIPHENYLS

PB83-234120
Inorganic Arsenic Emissions from High-Arsenic Primary Copper Smelters - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 402p, EPA-450/3-83-009A, PC A18/MF A01

Abstract: Standards of performance to control emissions of inorganic arsenic from new and existing primary copper smelters processing feed materials containing an annual average of 0.7 percent or greater arsenic are being proposed under Section 112 of the Clean Air Act. This document provides information on the background and authority, regulatory alternatives considered, and environmental and economic impacts of the regulatory alternatives.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB83-234138
Inorganic Arsenic Emissions from Low-Arsenic Primary Copper Smelters - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 490p, EPA-450/3-83-010A, PC A21/MF A01

Abstract: Standards of performance to control emissions of inorganic arsenic from new and existing primary copper smelters processing feed materials containing an annual average of less than 0.7 percent arsenic are being proposed under Section 112 of the Clean Air Act. This document provides information on the background and authority, regulatory alternatives considered, environmental and economic impacts of the regulatory alteratives.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB83-239020
Technical Assistance Document for Sampling and Analysis of Toxic Organic Compounds in Ambient Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs.
R. M. Riggan
Jun 83, 134p, EPA-600/4-83-027, PC A07/MF A01

Abstract: This project had as an objective the development of a Technical Assistance Document (TAD) for sampling and analysis of toxic organic compounds in ambient air. The primary users of this document are expected to be regional, state, and local environmental protection personnel who are faced with the need to determine ambient air quality for regulatory or information gathering purposes. The TAD consists of the following four sections: Introduction, Regulatory Issues Related to Toxic Organic Monitoring, Guidelines for Development of a Monitoring Plan, and Sampling and Analysis State of the Art. A topical index is included to assist the reader in locating the pertinent subject areas within the document.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB83-240473
Toxicology and Carcinogenesis Studies of Polybrominated Biphenyl Mixture (Firemaster FF-1) (CAS No. 67774-32-7)
NTP, Research Triangle Park, NC
Jun 83, 110p, NCI/NTP TR-244, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
67774-32-7	HEXABROMOBIPHENYL,2,4,5,2',4',5'-

PB83-245175
Directory of Federal and International Coordinating Groups for Toxic Substances, 3rd Edition
EPA, Washington, DC, OPTS
C.A. Allin
May 83, 61p, EPA-560/11S-83-004, PC A04/MF A01

Abstract: This directory provides a ready reference to Federal and international toxic chemical coordinating groups. It should facilitate communication among agencies and the groups themselves. Included are committees, task forces, and other groups that coordinate functions of Federal toxic control and testing agencies. There are Federal, State, nonprofit and private sector members on most of these groups. In this third edition, international coordinating groups have been included given the increasing visibility of other countries' activities related to chemicals.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
1332-21-4	ASBESTOS

PB83-247247
Control of Criteria and Non-Criteria Pollutants from Coal/Oil Mixture Combustion
EPA, Research Triangle Park, NC, IERL
Radian Corp.
M.E. Kelly, R.M. Parks, J.H.E. Stelling
Aug 83, 211p, EPA-600/7-83-040, PC A10/MF A01

Abstract: The report summarizes the existing data base on NOx, SO2, and particulate emissions from combustion sources burning coal/oil mixtures (COMs). The need for the U.S. to reduce its dependence on oil and expand its use of coal has prompted a number of industrial and utility energy producers to investigate converting their sites from the exclusive combustion of oil to combustion of COMs. Under contract to EPA and DOE, Radian has identified and evaluated emission control technologies that could be retrofitted to boilers to control criteria and non-criteria air pollutants. The report also gives emissions data for the trace elements As, Be, Cd, Cr, Hg, Ni, Se, and V. It identifies control techniques that can reduce the emissions of these pollutants. These techniques are assessed for their efficiency to reduce the emissions from COM combustion to levels representative of oil firing. Capital costs, operating expense, and overall lifecycle costs are also discussed.

CL-PM	PARTICULATE MATTER
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
10024-97-2	NITROUS OXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7439-97-6	MERCURY
7440-38-2	ARSENIC AND COMPOUNDS AS AS
7440-41-7	BERYLLIUM
7440-43-9	CADMIUM
7440-62-2	VANADIUM
7446-09-5	SULFUR DIOXIDE
7782-49-2	SELENIUM COMPOUNDS, AS SE

P883-256206
Bulk Gasoline Terminals: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 83, 186p, EPA-450/3-80-0388

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS

P883-256214
Identifying Potential Asbestos Exposures in Schools: The New York City Experience
EPA, Washington, DC, OTS
New York City Board of Education
J.F. Cesario, et al.
Jun 81, 55p, EPA-560/5-81-10, PC A04/MF A01

Abstract: This report describes the experience of the New York City (NYC) Board of Education and their asbestos-in-schools program. The program objectives were to: (a) identify current and potential asbestos exposures in NYC public schools, (b) evaluate the seriousness of these asbestos exposures, (c) recommend appropriate abatement action, and (d) oversee the completion of the recommended action. A survey of all school buildings was completed and priority problem areas were identified. Major abatement activities were scheduled for summer recess periods and completed as funds became available.

CT	CONTROL TECHNOLOGY DOCUMENT
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB83-258103
Draft Environmental Impact Statement. Nonmetallic Mineral Processing Plants: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 485p, EPA-450/3-83-001A, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
14	NONMETALLIC MINERALS, EXCEPT FUELS
141	DIMENSION STONE
142	CRUSHED AND BROKEN STONE
144	SAND AND GRAVEL
145	CLAY, CERAMIC & REFRACTORY MINERALS
147	CHEMICAL AND FERTILIZER MINERALS
148	NONMETALLIC MINERALS SERVICES
149	MISCELLANEOUS NONMETALLIC MINERALS

PB83-259713
Preliminary Environmental Assessment on Formcoke Cokemaking Process
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
D. W. Coy, C. C. Allen, B. H. Carpenter
Aug 83, 70p, EPA-600/7-83-046, PC A04/MF A01

Abstract: The report gives results of a preliminary environmental evaluation and assessment of formcoking. The work is based on readily available literature sources, a plant visit, formcoke plant proposal and feasibility study data, and discussions with engineers and operators involved with formcoking. Material balances, calculations, and engineering judgment were used to convert existing data and information into a form that can be used to compare environmental discharges between formcoking and conventional by-product coking. Comparison results are presented. The lack of environmental data on formcoking is noted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB83-262063
Multimedia Environmental Assessment of Electric Submerged Arc Furnaces Producing Ferroalloys
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
C. W. Westbrook
Sep 83, 265p, EPA-600/2-83-092, PC A12/MF A01

Abstract: The report gives results of sampling and analysis at five ferroalloy plants to determine the amounts of particulates and organics generated during manufacture of several products, the effect of furnace type on the amounts generated, and the amounts of these materials escaping to the environment. Samples were also taken of the influent to and effluent from two plant wastewater treatment systems and groundwater samples around the waste disposal area of one plant. More organics are emitted to the atmosphere than particulates. Open furnaces emit as much as or more organics to the atmosphere than do semi-enclosed furnaces (kg/MW-hr basis).

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3313	ELECTROMETALLURGICAL PRODUCTS

PB83-262071
Characterization of Emissions and Fuel Economy of In-Use Diesel Automobiles
EPA, Research Triangle Park, NC, ESRL
New York State Dept. of Environmental Conservation
R.E. Gibbs, et al.
Sep 83, 188p, EPA-600/3-83-087, PC A09/MF A01

Abstract: Exhaust emissions from twenty 1977-1980 in-use light-duty diesel vehicles were measured to determine the effects of driving cycle, mileage accumulation, and test conditions. Hydrocarbons, CO, CO2, NOx and particulates were measured for the FTP, HFET, CFDS, NYCC, 50 mph cruise (50C) and idle cycles. Particulate extract was tested for mutagenicity by the Ames method. Selected composite extracts were chemically analyzed and bioassayed. Emissions (g/mi) and fuel consumption generally increased in order 50C < HFET < CFDS < FTP < NYCC. A new method for real-time particulate measurement is described using a Tapered Element Oscillating Microbalance (TEOM). Bulk extract samples were fractionated and analyzed by GC, GC/MS and HPLC/UV. The acidic fraction had the highest specific activity, but most total activity was in the neutral fraction which contained fluorenones and oxy-PAH's.

CL-DIESEL	DIESEL FUEL EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
4111	LOCAL AND SUBURBAN TRANSIT
413	INTERCITY HIGHWAY TRANSPORTATION
4131	INTERCITY HIGHWAY TRANSPORTATION

PB83-264465
Guidelines for Monitoring Indoor Air Quality
EPA, Washington, DC, ORD
Geomet Technologies
N.L. Nagda, and H.E. Rector
Sep 83, 256p, EPA-600/4-83-046, PC A12/MF A01

Abstract: This document provides guidelines for designing programs to measure indoor air quality and associated factors. Brief summaries of past and current research and descriptions of indoor contaminants provide a background for developing the monitoring design. Factors that influence indoor air quality are discussed with the aid of mass balance models. An extensive review of measurement systems, including a listing of numerous instruments with their performance specifications, is presented. Design considerations are discussed for two types of studies--applied research in indoor air quality and investigations of building-associated problems. A systematic approach for developing the design is also described. In addition, the document presents a format for data reporting and suggestions on quality assurance and quality control.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING

PB83-265249
Human Exposure to Atmospheric Concentrations of Selected Chemicals. Volume 2
EPA, Research Triangle Park, NC, OAQPS
Systems Applications, Inc.
G. E. Anderson
Sep 83, 737p, PC A99/MF A01

Abstract: EPA commissioned Systems Applications, Inc. (SAI) to estimate, on a nationwide basis, public exposure to atmospheric concentrations of some forty chemicals. The purpose of the study was to provide EPA with information that would be helpful for determining which of the chemicals to study in more detail and in what order. The emphasis was on estimates that would support rough relative comparisons among the chemicals. There was no intent to define, by a scientifically defensible methodology, actual public exposure and actual ambient air concentrations; the purpose did not warrant the very happy expenditure of funds that would be needed to carry out such a project. The study made free use of such techniques as algorithms for estimating emissions rather than actual emissions data, constructed plant locations rather than actual plant locations, simplified dispersion modeling to estimate ambient air concentrations, and a constructed 'population' file that relied on extrapolation of 1970 Bureau of Census data on where people lived.

CL-ORGANIC	ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS

PB83-922901
Methodology in Use for the Assessment of Carcinogenic Risk. I. Chemical Agents
National Cancer Institute
1983, 85 p., PC A05/MF A01

Abstract: Oncology Overviews are a service of the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, intended to facilitate and promote the exchange of information between cancer scientists by keeping them aware of literature related to their research being published by other laboratories throughout the world. Each Oncology Overview represents a survey of the literature associated with a selected area of cancer research. It contains abstracts of articles which have been selected and organized by researchers associated with the field. Contents: Experimental studies used for the assessment of carcinogenic risk from chemical agents; Epidemiological methods used for the assessment of carcinogenic risk from chemical agents; Combination of methods used for the assessment of carcinogenic risk from chemical agents; Models and mathematical analyses used to evaluate data for the assessment of carcinogenic risk from chemical agents; The role of assessment of carcinogenic risk in the regulation of chemical agents.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
RA	RISK ASSESSMENT

PB84-100056
Health Assessment Document for Toluene
EPA, Research Triangle Park, NC, ECAO
Syracuse Research Corp.
Aug 83, 427p, EPA-600/8-82-008F, PC A19/MF A01

Abstract: The health effect of primary concern with regard to exposures of humans to toluene is dysfunction of the central nervous system (CNS). Occupational exposures in the range of 200 to 1,500 ppm have elicited dose-related CNS alternations. Although myelotoxicity was previously attributed to toluene, recent evidence indicated that toluene is not toxic to the blood or bone marrow; myelotoxic effects are considered to have been the result of concurrent exposure to benzene. Available evidence is inadequate for assessing the carcinogenic potential of toluene. Although a 24-month inhalation exposure of rates to 300 ppm did not produce any positive carcinogenic effects, various design deficiencies precluded the usefulness of this study in assessing carcinogenic potential. Toluene has been shown to be non-mutagenic in a battery of microbial, mammalian cell, and whole organism test systems. Animal exposure studies suggest that toluene has low teratogenic potential. However, embryotoxicity has been shown to be an endpoint of concern. The reproductive effects of toluene is a category recommended for additional research. Based on available exposure estimates, the only group at possible high risk are workers exposed at or near the threshold limit value (100 ppm).

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
108-88-3	TOLUENE

PB84-101898
Review of New Source Performance Standards for Petroleum Refinery Claus Sulfur Recovery Plants
EPA, Research Triangle Park, NC, OAQPS
Aug 83, 125p, EPA-450/3-83-014, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
7704-34-9	SULFUR

PB84-102540
Human Exposure to Atmospheric Concentrations of Selected Chemicals. Volume 1
EPA, Research Triangle Park, NC, OAQPS
Systems Applications, Inc.
G. E. Anderson
Sep 83, 230p, PC A11/MF A01

Abstract: EPA commissioned Systems Applications, Inc. (SAI) to estimate, on a nationwide basis, public exposure to atmospheric concentrations of some forty chemicals. The purpose of the study was to provide EPA with information that would be helpful for determining which of the chemicals to study in more detail and in what order. The emphasis was on estimates that would support rough relative comparisons among the chemicals. There was no intent to define, by a scientifically defensible methodology, actual public exposure and actual ambient air concentrations; the purpose did not warrant the very happy expenditure of funds that would be needed to carry out such a project. The study made free use of such techniques as algorithms for estimating emissions rather than actual emissions data, constructed plant locations rather than actual plant locations, simplified dispersion modeling to estimate ambient air concentrations, and a constructed 'population' file that relied on extrapolation of 1970 Bureau of Census data on where people lived.

CL-ORGANIC	ORGANIC COMPOUNDS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS

PB84-104538
Characterization of Exhaust Emissions from Operation of a Light-Duty Gasoline Vehicle on Alternate Source Gasoline Fuels
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
L.R. Smith
Aug 83, 114p, EPA-460/3-83-008, PC A06/MF A01

Abstract: This report describes the laboratory effort to characterize regulated and unregulated exhaust emissions from a 1981 Volkswagen Rabbit operating on Amoco Indolene gasoline and five alternate-source fuels or fuel blends. These five alternate-source fuels included Mobil MTG gasoline, Simulated Coal gasoline, EDS Naphtha blend, Sasol blend (lead chemically removed), and H-Coal Naphtha blend. The test vehicle was operated over the Light-Duty Federal Test Procedure (FTP) and the Highway Fuel Economy Driving Schedule (HFET). Exhaust constituents measured, in addition to the regulated emissions, included aldehydes and ketones, particulate, individual hydrocarbons, sulfate ammonia, cyanide, organic amines, organic sulfides, phenols, nitrosamines, benzo(a)-pyrene and major elements in particulate.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-NITROSO	NITROSO COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-SULFATE	SULFATES
CL-SULFIDE	SULFIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
37	TRANSPORTATION EQUIPMENT
371	MOTOR VEHICLES AND EQUIPMENT
50-32-8	BENZO(A)PYRENE
57-12-5	CYANIDE

PB84-105311
VOC Fugitive Emissions in Synthetic Organic Chemicals Manufacturing Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Feb 83, 482p, EPA-450/3-80-033b, PC A21/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS

PB84-110535
Air Quality Data for Metals 1977 through 1979 from the National Air Surveillance Networks
EPA, Research Triangle Park, EMSL
E. G. Evans, et al.
Oct 83, 309p, EPA-600/4-83-053, PC A14/MF A01

Abstract: The National Air Surveillance Network, which has existed for over 20 years, provides air quality information for many urban and nonurban locations within the United States. The data in this publication were collected with the generous support of the many state and local air pollution control agencies that operate the National Air Surveillance Network stations. Also, the ten EPA Regional Offices have participated in this program since 1973 by sending weighted high volume filters to the centralized laboratory for analysis. This report summarizes the network data for metals determined from high volume samples collected from 1977 through 1979. Concentration values are presented in the form of cumulative frequency distributions. Arithmetic and geometric sample statistics are also reported, as are measures of the precision associated with the analytical methods employed. This report is a continuation in a series of publications of network data.

AM	AMBIENT MONITORING
CL-METAL	METALLIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-114354
Vinyl Chloride: A Review of National Emission Standards
EPA, Research Triangle Park, NC, OAQPS
TRW, Inc.
Feb 82, 266p, EPA-450/3-82-003, PC A12/MF A01

Abstract: This VC NESHAP Review Study assesses the current VC regulation through an investigation of emission control techniques and technological developments in the industry. The study encompasses evaluations of existing and new control technologies, sources not regulated by the standard, and enforcement and compliance experience since promulgation of the standard. Information and data evaluated during this study were obtained through literature searches, plant visits, and inter- views with industrial representatives and EPA Regional Office personnel. The results of this review study will form the basis for possible revision of the existing standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE
9002-86-2	POLYVINYL CHLORIDE LATEX

PB84-114834
Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 83, 547p, EPA-450/3-82-001A, PC A23/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS

PB84-114859
Beverage Can Surface Coating Industry--Background Information for Promulgated Standards of Performance
EPA, Research Triangle Park, NC, OAQPS
Aug 83, 53p, EPA-450/3-80-036B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
34	FABRICATED METAL PRODUCTS
341	METAL CANS AND SHIPPING CONTAINERS
3411	METAL CANS
347	METAL SERVICES, NEC

PB84-116045
Petroleum Dry Cleaners - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 82, 282p, EPA-450/3-82-012A, PC A13/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7215	COIN-OPERATED LAUNDRIES AND CLEANING
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB84-116748
Pressure Sensitive Tape and Label Surface Coating Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 83, 38p, EPA-450/3-80-0038, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2891	ADHESIVES AND SEALANTS

PB84-118843
Health Assessment Document for 1,1,2-Trichloro-1,2,2-Trifluoroethane (Chlorofluorocarbon CFC-113)
EPA, Research Triangle Park, NC, OHEA
R. Carchman, M. Greenberg
Sep 83, 100p, EPA 600/8-82-002, PC A06/MFA01

Abstract: Chlorofluorocarbon 113 (1,1,2-trichloro-1,2,2-trifluoroethane) has little potential to cause direct adverse health effects at levels found or expected in the general environment (<4.2 ppb). Experimental data do not indicate adverse health effects in humans at a TLV of 1,000 ppm. At exposure levels greatly exceeding 1,000 ppm, impairment of neurological and cognitive functions (humans) and detrimental cardiovascular effects (animals) have been observed.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
76-13-1	TRICHLOROTRIFLUOROMETHANE,1,1,2-

PB84-120328
Emission Characterization of Major Fossil Fuel Power Plants in the Ohio River Valley
EPA, Research Triangle Park, NC, ESRL
PEDCo-Environmental, Inc.
G. Baker, et al.
Nov 83, 258p, EPA-600/3-83-109, PC A12/MF A01

Abstract: This study characterizes the atmospheric emissions from five major coal-fired power plant units in the Ohio River Valley between Portsmouth, Ohio, and Louisville, Kentucky. This characterization provides data that are representative of the boiler fuel emission control combinations of the current power plant population as well as those scheduled to go on line before the end of 1983. The Environmental Protection Agency will use this data to determine the impact of existing and planned power plants on air quality in this river valley.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES

PB84-120641
Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in the Steel Industry--Background Information for Proposed Revisions to Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 83, 412p, EPA-450/3-82-020A, PC A18/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES

PB84-122910
Exhaust Emissions from a Diesel Engine
EPA, Research Triangle Park, NC, ESRL
Johns Hopkins Univ.
T. M. Risby
Nov 83, 113p, EPA-600/3-83-106, PC A06/MF A01

Abstract: Studies were performed using (1) Diesel particles collected from the undiluted exhaust of a single-cylinder engine, operated at constant speed and load, using a binary pure hydrocarbon fuel with air or gas mixture oxiders, and (2) Diesel particles collected from the diluted exhaust of a multicylinder engine operated on a commercial fuel. The physicochemical properties of the particles were determined by static and dynamic methods. The organic adsorbate was characterized by chromatographic and mass spectrometric procedures and by microbial testing protocols. Electron paramagnetic personance spectrometry and high performance liquid chromatography were used to study reactivity of the organic adsorbates. The particles collected from the exhaust of Diesel engines operated on binary pure hydrocarbons and on commercial fuels contained similar compounds in the organic adsorbates. The nitrogen in these compounds is derived mainly from the oxidizer (Air). The microbial mutagenic activities of the organic adsorbates found on the surface of both types of Diesel particles are comparable. These microbial mutagenic activities can be attributed mainly to the presence of nitrated polynuclear aromatic hydrocarbons.

CL-DIESEL	DIESEL FUEL EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
35	MACHINERY, EXCEPT ELECTRICAL
351	ENGINES AND TURBINES
3519	INTERNAL COMBUSTION ENGINES, NEC

PB84-124585
Chemical Information Resources Handbook. Second Edition: Toxics Integration Information Series
EPA, Washington, DC, OPTS
Koba Associates, Inc.
D. Kaufman, J. Normandy, J. Pooles
Sep 83, 152p, EPA-560/TIIS-83-006, PC A08/MF A01

Abstract: This handbook describes several of the more important chemical information resources available and accessible through government and private organizations. It also provides a framework for searching and retrieving chemical and environmental data.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB84-128032
Mini-Assessment: Total Exposure Assessment and Exposure-Dose Relationships
EPA, Washington, DC, OER
ICF, Inc.
W.M. Mendez, Jr., K.B. Kolsky, M.C. Gibbs
Dec 83, 158p, EPA-600/6-84-002, PC A08/MF A01

Abstract: This report provides a brief examination of recent (1) research in the areas of total exposure assessment and (2) research concerning the relationship between patterns of exposure to environmental pollutants and dose levels received by exposed individuals and populations. This assessment is intended to provide policy makers with a brief, concise discussion of important trends in recent research; it is not meant to be a comprehensive literature review.

EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB84-128982
Evaluation of Genotoxic Effects in Human Populations
EPA, Research Triangle Park, NC, HERL
M.D. Waters, et al.
1983, 67p, EPA-600/D-84-013, PC A04/MF A01

Abstract: There are demonstrable associations in experimental animals between DNA damage in somatic cells and the development of cancer, and between DNA damage in germ cells and the incidence of genetic disease in offspring. Thus, there is substantial evidence of the need to detect and to quantitate chemically-induced genetic damage in humans in order to assess the potential for cancer and genetic disease. Current methods for estimating human risk of cancer have been based on knowledge of human exposure and epidemiological data. An alternative approach would base such estimates of risk on knowledge of exposure and of damage to the DNA of human cells and tissues. The principal difficulty in performing such assessments lies in the uncertainty of translating information from tests for genetic damage in human cells and tissues into reliable estimates of risk for cancer or genetic disease. This poster concerns: (1) the development of mammalian cell methods that may be used ultimately to evaluate genotoxic effects in humans and (2) our initial attempts to implement a 'parallelogram' approach whereby such methods can be used, collectively, to relate quantitative information on genetic damage to quantitative estimates of risk for cancer or genetic disease.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT

PB84-129683
Airborne Asbestos Levels in Schools
EPA, Washington, DC, OTS
Midwest Research Inst.
P.C. Constant, Jr., et al.
Jun 83, 186p, EPA-560/5-83-003, PC A09/MF A01

Abstract: Air (116) and bulk (192) samples were collected from 48 units at 25 different schools of an urban independent school district. These were analyzed respectively by transmission electron microscopy and polarized light microscopy techniques for asbestos fiber concentrations. The new factor of releasability (of fibers) rating resulted from the bulk fiber analysis. Each sampling site was rated by a special five-person team for assessment tools: algorithm, condition, accessibility, part of air moving system, material exposure, friability and water damage, and people's activity at the site. The results were statistically analyzed to document potential exposure to airborne asbestos resulting from the friable, asbestos-containing material in schools and to develop an exposure assessment tool that would be based on the above stated factors.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB84-130442
Analysis of Residential Coal Stove Emissions
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Div.
M. Cooke, et al.
Dec 83, 35p, EPA-600/7-83-060, PC A03/MF A01

Abstract: The report gives results of an evaluation, in cooperation with the State of Vermont's Agency of Environmental Conservation, of emissions generated by antracite and bituminous coal used for residential heating. A residential coal stove was operated with both coals, while comparing high and low burn rate operations. A second stove, a commercial stove designed for wood burning but modified by the manufacturer for coal, was also tested with both coals. Combustion gases were collected by two techniques: evacuated glass bulbs and a Modified Method 5 sampling train. Volatile species were analyzed by direct gas mass spectrometry and by gas chromatography using selective detectors. Polynuclear aromatic hydrocarbons (PAHs) were analyzed by high resolution gas chromatography/mass spectrometry. High levels of particulates, total organics, and sulfur dioxide were found in the emissions from bituminous coal combustion in a residential coal stove. High PAH emissions were found with both bituminous and anthracite combustion. The stove converted from wood to coal burning proved to be highly polluting, especially when used with bituminous coal.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB84-133347
Process Modifications Towards Minimization of Environmental Pollutants in the Chemical Processing Industry
EPA, Cincinnati, OH, IERL
Illinois Institute of Technology, Chicago
L.L. Tavlarides
Nov 83, 194p, EPA-600/2-83-120, PC A09/MF A01

Abstract: The report covers the development of a matrix of significant pollution problems and attendant process modifications which would have impact on the reduction or elimination of pollutants inherent in these processes. Industries covered are: (1) Refining of Nonferrous Metals; (2) The Electroplating Industry; (3) Coal Conversion Processes; (4) Specialty Chemicals; (5) The Paper & Pulp Industry; (6) Iron and Steel Industry; (7) The Primary Aluminum Industry; and (8) Phosphate Fertilizer Industry. The matrix for each of the industries noted covers the individual process; the pollutants and their sources in the process; the nature of the pollutant and the control strategy for mitigation or reduction of the pollutant.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
262	PAPER MILLS, EXCEPT BUILDING PAPER
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2874	PHOSPHATIC FERTILIZERS
29	PETROLEUM AND COAL PRODUCTS
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM

PB84-134590/REB
Health Effects Assessment for Zinc (and Compounds)
EPA, Cincinatti, OH, ECAO
Sep 84, 59p, EPA-540/1-86-048, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for zinc (and compounds) based on both oral and inhalation exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7440-66-6	ZINC

PB84-137231
Control of Criteria and Non-Criteria Pollutants from Coal/Liquid Mixture Combustion
EPA, Research Triangle Park, NC, IERL
Radian Corp.
J.H.E. Stelling, S.J. Call
Jan 84, 229p, EPA-600/7-84-001, PC A11/MF A01

Abstract: The report summarizes the existing data base on NOx, SO2, and particulate matter emissions from combustion sources burning coal/liquid mixtures (CLMs). It also gives available control techniques that can reduce the emissions of the above pollutants. It assesses these techniques for their efficiency to reduce emissions from CLM combustion to levels representative of oil firing. In addition to the technical evaluations, economic evaluations of control technologies are presented. Capital costs, operating expense, and overall lifecycle costs are discussed. Multipollutant control capabilities of the selected control technologies are assessed, as well as any secondary pollution problems associated with using a particular control technique. Any particular problems with retrofit applications of the devices are highlighted, and any interferences of the control devices with the combustion process are discussed.

CL-PM	PARTICULATE MATTER
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
10024-97-2	NITROUS OXIDE
10102-44-0	NITROGEN DIOXIDE
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB84-138973
In vitro and In vivo Mutagenicity Studies of Environmental Chemicals
EPA, Research Triangle Park, NC, HERL
SRI International
D.C.L. Jones, et al.
Jan 84, 583p, EPA-600/1-84-003, PC A25/MF A01

Abstract: The objectives of this project were to evaluate the mutagenicity of various compounds, mostly pesticides, using microbial and mammalian cell in vitro techniques, as well as in vivo techniques in Drosophila and mice, and to further develop and refine these procedures for application as test batteries. Seventy-nine compounds were evaluated for mutagenicity in one or more of 11 test systems: Salmonella typhimurium plate incorporation assay; E. coli WP-2 reverse mutation assay; S. cerevisiae D3 mitotic recombination assay; Saccharomyces cerevisiae D7 assays; Escherichia Coli, Bacillus subtilis, and S. typhimurium relative toxicity assays; siter-chromatid exchange in Chinese hamster ovary cells assay; L5178Y mouse lymphoma cell forward mutation assay; unscheduled DNA synthesis assay; mouse micronucleus assay; Drosophila sex-linked recessive lethal assay; and mouse dominant lethal assay. The data from the evaluation of 41 pesticides and 10 industrial chemicals are presented in this report. Qualitative interpretations of these data and of data obtained under a previous contract, including those for an additional 28 pesticides, are summarized.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC

PB84-139435
Retrofit Cost Relationships for Hazardous Waste Incineration
EPA, Cincinnati, OH, IERL
Acurex Corp.
K. Lim, et al.
Jan 84, 71p, EPA-600/2-84-008, PC A04/MF A01

Abstract: This study reports a methodology, and an accompanying set of empirical cost relationships, that can be used to estimate the costs of retrofitting/upgrading various components of existing hazardous waste incineration facilities to comply with RCRA performance requirements. Both the methodology and the retrofit cost relationships were intended to focus on major capital additions or subsystem modifications that could be required for RCRA compliance. The results of the study are expressed in a series of empirical relationships between the costs for various capital modifications/additions and factors that significantly impact these costs, e.g., capacity, materials of construction, etc. Costs are developed for (1) various aspects of combustion system retrofit to improve destruction of toxic waste constituents, (2) scrubbing system component addition, replacement, or upgrading to improve particulate and/or HCl removal, and (3) addition or replacement of ancillary equipment mandated by combustion or scrubbing system retrofit. The costs are based on a combination of in-house engineering and vendor-supplied budgetary cost estimates.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-140870
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 1: Pilot Study of Combustion Emissions Variability
EPA, Washington, DC, OTS
Midwest Research Institute
C. Haile, et al.
Jun 83, 317p, EPA-560/5-83-004, PC A14/MF A01

Abstract: This pilot study was conducted as a prelude to a nationwide survey of organic emissions from major stationary combustion sources. The primary objectives of the pilot study were to obtain data on the variability of organic emissions from such sources and to evaluate the sampling and analysis methods. These data are used to construct the survey design for the nationwide survey. The compounds of interest are polynuclear aromatic hydrocarbons (PAHs) and chlorinated aromatic compounds, including polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins (PCDDs), and polychlorinated di-benzofurans (PCDFs). Of particular interest is 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). In addition total cadmium was also determined in special samples from both plants to meet special Environmental Protection Agency (EPA) needs. A summary of the results of this study is contained in Section 2 of this report. Section 3 presents recommendations for future work. Brief descriptions of the two combustion sources are contained in Section 4. The sampling and analysis methods are described in Sections 5 and 6. Sections 7 and 8 present the field test data and analytical results. The analytical quality assurance results are summarized in Section 9. Section 10 presents the emissions results and Section 11 is a statistical summary of the emissions results.

CL-DIOXIN	DIOXINS
CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
132-64-9	DIBENZOFURAN
1336-36-3	POLYCHLORINATED BIPHENYLS
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB84-141548
Organic Emissions from Ferrous Metallurgical Industries: Compilation of Emission Factors and Control Technologies
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
R. L. Stallings
Jan 84, 119p, EPA-600/2-84-003, PC A06/MF A01

Abstract: The report gives results of a review and analysis of the information and data available in the public domain on organic emissions from the ferrous metallurgy industry, specifically the iron and steel, iron foundry, and ferroalloy industries. Emission sources and information gaps are identified, and the credibility ratings or categories in these industries reported. Organic emission factors for various source categories in these industries are compiled. This report, which reflects accurately the present state of knowledge about organic emissions in the iron and steel, iron foundry, and ferroalloy industries, may be used as a guide to plan and direct programs for further studies, particularly a program to characterize more precisely those classes of organic species (comprising the volatile organic compound category) that are released from the potential sources identifed.

CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
332	IRON AND STEEL FOUNDRIES

PB84-142322
Relative Airborne Losses of Commercial 2,4-D Formulations from a Simulated Wheat Field
EPA, Corvallis, OR, Corvallis Environmental Research Lab
J. D. Gile
83, 8p, EPA-600/J-83-126, PC A02/MF A01

Abstract: The relative airborne losses of seven commercial 2,4-D (2,4-dichlorophenoxyacetic acid) formulations were evaluated in a simulated wheat field. The formulations tested were butyl ester, isooctyl ester, two propylene glycol butyl ether esters, ethanol/isopropyl amine, and two dimethyl amines. The butyl and isoctyl esters exhibited the greatest airborne losses, followed by the propylene glycol butyl ether esters. The amines were nearly nonvolatile. Two to 4 days after application, the 2,5-dichloro-4-hydroxyphenoxyacetic acid metabolite or 2,4-D predominated in all air samples. This material as well as the 2,4-D acid predominated in all plant samples with only traces of the parent esters observed. No extractable 2,4-D related residues were detected in the soil.

CL-AMINE	AMINES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
01	AGRICULTURAL PRODUCTION-CROPS
07	AGRICULTURAL SERVICES
94-75-7	DICHLOROPHENOXYACETICACID,2,4-

PB84-143254
Draft Environmental Impact Statement Sulfur Oxides Emissions from Fluid Catalytic Cracking Unit Regenerators: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jan 84, 343p, EPA-450/3-82-013A, PC A15/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB84-144146
Ambient Concentrations of Polycyclic Organic Matter
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
S. A. Smith
Oct 83, 72p, EPA-450/5-83-010A, PC A04/MF A01

Abstract: This report is released to partially satisfy the requirements of Section 122 of the Clean Air Act, as amended in 1977. This report surveys and summarizes existing published polycyclic organic matter (POM) ambient concentration data.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-144153
Sources and Emissions of Polycyclic Organic Matter (POM)
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
M.E. Kelly
Dec 83, 154p, EPA-450/5-83-0108, PC A08/MF A01

Abstract: This report is released to partially satisfy the requirements of Section 122 of the Clean Air Act, as amended in 1977. This report surveys Polycyclic Organic Matter (POM) sources and presents technical data used to support decision making on the need for listing POM under Section 108(a)(1), Section 112(b)(1)(A), or Section 111(b)(1)(A) as required by Section 122 of the Clean Air Act. Data are presented describing potential sources of POM emissions, control techniques used for POM emissions, and estimated POM emissions. A summary of estimated national POM emissions is provided. This summary includes estimates of natural POM emissions.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-145564
Documentation of EMSL-LV (Environmental Monitoring Systems Laboratory-Las Vegas) Contribution to Dallas Lead Study
EPA, Las Vegas, NV, EMSL
K.W. Brown, et al.
Jan 84, 572p, EPA-600/4-84-012, PC A24/MF A01

Abstract: During the summer of 1982 the U.S. Environmental Protection Agency (EPA), conducted a comprehensive multimedia environmental monitoring program in the vicinity of two secondary lead smelters located in Dallas, Texas. This monitoring program, which was conducted within a 1 mile radius of the two smelters, included a major soils investigation and the collection and analysis of approximately 3,000 soil, 1,000 blood, and 750 dust samples. Approximately 250 vegetation samples were also collected. For this study EMSL-LV was requested to provide documentation and guidance for the quality assurance/quality control (QA/QC) program, and to provide the analytical methods and soil sampling procedures protocols. The results of this soil monitoring strategy plus the protocols, reports and pertinent documentation provided by EMSL-LV for the Dallas Lead Study are presented.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
7439-92-1	LEAD POWDER

PB84-148170
Hydrocarbon Solvent Recovery in the Presence of Resin Contaminants
EPA, Cincinnati, OH, IERL
Arkansas Univ.
J.L. Turpin
Jan 84, 48p, EPA-600/2-84-033, PC A03/MF A01

Abstract: A system was developed to recover acetone from an air stream in which there were suspended expoxy resin particles. This recovery problem is encountered in the manufacture of fiber glass reinforced plastic pipe. It is representative of numerous other industrial situations which require the recovery of hydrocarbon solvents from a gaseous stream containing resin particles in order to eliminate atmospheric pollution. The system developed was a three-stage low temperature condensation process preceded by a cascade impactor. A scale model of the system was designed and constructed. It was tested in the laboratory, and on a split stream of an actual plant process.

CL-PM	PARTICULATE MATTER
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
67-64-1	ACETONE

PB84-148295
Criteria for a Recommended Standard: Occupational Exposure to Styrene
National Institute of Occupational Safety and Health
1983, 262 p., PC A12/MF A01
NIOSH PUB No: 82-119, AVAIL NIOSH

Abstract: The report is one in a continuing series of recommended standards for safe exposure to levels of chemical hazards found in the workplace. The standards are designed to protect the health and safety of workers up to a 10-hour workday, 40-hour work week over a working lifetime. Topics covered vary slightly for each chemical, but may include sampling and analysis in the workplace air, worker protection procedures, monitoring and recordkeeping, toxicology data, and environmental data.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
100-42-5	STYRENE

PB84-148345
National Symposium on Recent Advances in Pollutant Monitoring of Ambient Air and Stationary Sources, Held at Raleigh, North Carolina May 4-7, 1982
EPA, Research Triangle Park, NC, EMSL
May 83, 402p, EPA-600/9-83-007, PC A18/MF A01

Abstract: The second national symposium to explore recent developments that may improve the state-of-the-art for monitoring techniques was presented by the U.S. Environmental Protection Agency, Environmental Monitoring Systems Laboratory (EMSL), May 4 through May 7, 1982, at the Mission Valley Inn in Raleigh, North Carolina. The symposium is part of a continuing effort to explore recent advances in pollutant monitoring of ambient air and stationary sources. Approximately 300 engineers and scientists from industry, universities, and control agencies attended the meeting. The symposium served as a forum for exchange of ideas and information. The presentations addressed both source emission monitoring and ambient air monitoring. Included were presentations on gaseous organics, particulate pollutants, and personal monitoring. Also presented were findings relative to sampling and analytical methods as well as to a broad spectrum of organic chemicals in outdoor and indoor air. This publication is intended for those interested in air monitoring and who were unable to attend the symposium. This report includes only those papers submitted voluntarily by speakers. An agenda is included listing all the speakers who participated in the symposium.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB84-148980
Organic Dyes and Pigments Data Base
EPA, Cincinnati, OH, IERL
SRI International
L. Swett, A. Twhigg, K.E. McCaleb
Jan 84, 52p, EPA-600/2-84-032, PC A04/MF A01

Abstract: The objective of this research program was to compile a data base covering all the commercially significant dyes and pigments produced or imported in the United States. The Organic Dyes and Pigments Data Base (ODPDB) contains the following data elements: chemical-related data (consisting of synonyms, identifiers, and descriptions of manufacturing processes, end uses, and manufacturing wastewater emissions); toxicity data (comprised of NIOSH registry numbers, threshold limit values and various standard test data); economic data on production and sales; and producer-related data (made up of company and plant site identifiers, their locations, and the associated river basins). Data were compiled on 1434 commercial products from a variety of sources, including on-line information retrieval systems, government statistical and research publications, standard industry handbooks, and in-house technical expertise. Correlation of data is accomplished by means of a System 2000 data base management system, which permits retrieval on the basis of various 'key' data elements.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
26	PAPER AND ALLIED PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS

PB84-149137
Rubber-Processing Chemicals Data Base
EPA, Cincinnati, OH, IERL
SRI International
A. Twhigg, et al.
Jan 84, 40p, EPA-600/2-84-030, PC A03/MF A01

Abstract: The objective of this research program was to compile a data base covering all the commercially significant organic rubber-processing chemicals produced or imported in the United States. The Rubber-Processing Chemicals Data Base contains the following elements: chemical information (identification number, chemical names, synonyms, and identifiers); economic information (production, sales, and unit cost); use information; product process information; and chemical producer information (company and plant site identifiers, their locations, and the associated river basins and Air Quality Control Regions). Data were compiled on 327 commercial products from a variety of sources, including on-line information retrieval systems, government statistical and research publications, standard industry handbooks, and in-house technical expertise. Correlation of data is accomplished by means of a System 2000 data base management system, which permits retrieval on the basis of various 'key' data elements.

EPA	ENVIRONMENTAL PROTECTION ' ENCY
SA	SOURCE ASSESSMENT
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
302	RUBBER AND PLASTICS FOOTWEAR
303	RECLAIMED RUBBER
304	RUBBER AND PLASTICS HOSE AND BELTING
306	FABRICATED RUBBER PRODUCTS, NEC
50	WHOLESALE TRADE-DURABLE GOODS
501	MOTOR VEHICLES & AUTOMOTIVE EQUIPMENT
5014	TIRES AND TUBES

PB84-149152
Health Assessment Document for Acrylonitrile
EPA, Research Triangle Park, NC, ECAO
D. K. Basu, et al.
Oct 83, 343p, EPA-600/8-82-007F, PC A15/MF A01

Abstract: Acute acrylonitrile intoxication in humans, like many volatile organic compounds, results in irritation of the eyes and nose, weakness, labored breathing, dizziness, impaired judgment, cyanosis, nausea, and convulsions. Unlike many of these other organics, acrylonitrile causes severe burns upon contact with the liquid chemical. Some significant functional disorders of the liver and kidney are observed under subchronic exposure conditions; while chronic exposure results in signs (unhealthy appearance, weight loss and early death) that may be related to the low food and water consumption resulting from the unpleasant taste of acrylonitrile in water. Pathological changes in rats believed to be treatment related include hyperplasia and hyperkeratosis of the squamous cells in the brain and mammary gland hyperplasia in females. The present data base from human and toxicologic studies provides enough evidence such that the International Agency for Research on Cancer (IARC) has characterized acrylonitrile as an animal carcinogen and a likely human carcinogen. Unlike the animal bioassay data, the human data base does not unequivocally demonstrate a causal association.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
107-13-1 ACRYLONITRILE

PB84-149160
Source Receptor Methodology for Some Chlorinated Hydrocarbons
EPA, Research Triangle Park, NC, ESRL
SRI International
F.L. Ludwig, E.M. Liston, L.J. Salas
Jan 84, 71p, EPA-600/3-84-023, PC A04/MF A01

Abstract: A source-receptor methodology is described that can be used to estimate emission rates of halogenated hydrocarbons from a manufacturing plant when access to the plant is not possible. An inert tracer is released at a known rate from a vehicle traveling back and forth on a road outside the plant area. Samples are collected downwind of the plant (at a distance of about 1 to 5 km) and analyzed for the tracer and the materials of interest. The relationship between the emission rates of the tracer and the measured concentrations has been derived. The method is generally insensitive to meteorological conditions, if applied at night or under overcast conditions during the day. It is suitable for estimating fugitive emissions from sources within 10 or 15 m of ground level. Once emission rates have been determined, conventional Gaussian methods may be used to estimate expected maximum ground-level concentrations of the materials of interest downwind of the source area. A suitable manufacturing plant was selected (Vulcan Materials Company near Wichita, Kansas) and the method was applied to estimate emission rates for four different halogenated hydrocarbons. The feasibility of the methodology was demonstrated and suggestions for improvements were made.

AM AMBIENT MONITORING
CL-CHC CHLORINATED HYDROCARBONS
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING

PB84-149368
Inspection and Operating and Maintenance Guidelines for Secondary Lead Smelter Air Pollution Control
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
F. Hall, R. Hawks, G. Saunders
Jan 84, 127p, EPA-600/2-84-026, PC A07/MF A01

Abstract: The prevention of emissions from secondary lead smelters depends upon the procedures implemented to achieve initial compliance and remain in a state of continuing compliance with applicable emission limitations. This manual was developed as an inspection manual incorporating operation and maintenance information for secondary lead smelting. It presents an overview of secondary lead operations, describes typical emission problems associated with the material preparation, smelting, refining and oxidation processes and reviews the potential causes of the problems and possible corrective measures. It also describes the types of air pollution control equipment used in secondary lead smelting operations and typical O&M problems experienced with this equipment. The manual is heavily oriented towards an inspection approach emphasizing techniques to achieve improvements in the status of continuing compliance through operations and maintenance procedures. It has been written for use both as an educational and reference tool by state and local enforcement field inspectors and entry-level engineers whose familiarity with secondary lead operations may be limited, and, as such, can be useful both as a training manual and as a guidebook during field inspections.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
334	SECONDARY NONFERROUS METALS

PB84-150192
Evaluation of Radon Sources and Phosphate Slag in Butte, Montana
EPA, Washington, DC
Montana State Dept. of Health and Environmental Sciences
L.L. Lloyd, and M.F. O'Connell
Jun 83, 87p, EPA-520/6-83-026, PC A05/MF A01

Abstract: In July, 1980, the Montana Department of Health and Environmental Sciences (DHES) contracted with the EPA to further investigate the potential sources of radon in Butte. Under the agreement with EPA, surface geological constitutes, air, water and natural gas supplies, and building materials were investigated as potential radon sources. Following the investigation of potential radon sources in Butte, it was concluded that ambient air, soils and surface geology all contribute to Butte's radon problem. It is believed that homes constructed over major factures or mineralized veins are the most severely impacted. Aplite and quartz monzonite also contribute to the problem, but to a lesser extent. Ambient air is probably a major source of indoor radon in structures having low concentrations.

CL-PHOSPHA	PHOSPHATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT
10043-92-2	RADON
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
52	BUILDING MATERIALS & GARDEN SUPPLIES

PB84-151448
SO2 Emissions in Natural Gas Production Standards: Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Nov 83, 438p, EPA-450/3-82-023A, PC A19/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
13	OIL AND GAS EXTRACTION
131	CRUDE PETROLEUM AND NATURAL GAS
1311	CRUDE PETROLEUM AND NATURAL GAS
138	OIL AND GAS FIELD SERVICES
1381	DRILLING OIL AND GAS WELLS
7446-09-5	SULFUR DIOXIDE

PB84-151984
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 3: National Survey of Organic Emissions from Coal Fired Utility Boiler Plants
EPA
Midwest Research Institute
C.L.Haile, et al.
Sep 83, 236p, EPA-560/5-83-006, PC A11/MF A01

Abstract: This study was conducted as a part of a nationwide survey to determine organic emissions from major stationary combustion sources. The principal compounds of interest are polynuclear aromatic hydrocarbons (PAHs) and chlorinated aromatic compounds, including polychlorinated biphenyls (PCBs), polychlorinated dibenzo-o-dioxins (PCDDs), and polychlorinated dibenzofurans (PCDFs). This report describes the methods and results of sampling and analysis activities at the seven plants constituting the nationwide survey of coal fired utility boiler plants.

CL-CHC	CHLORINATED HYDROCARBONS
CL-DIOXIN	DIOXINS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
132-64-9	DIBENZOFURAN
1336-36-3	POLYCHLORINATED BIPHENYLS
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB84-152073
Inorganic Arsenic Emissions from Glass Manufacturing Plants - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Apr 83, 190p, EPA-450/3-83-011A, PC A09/MF A01

Abstract: A national emission standard for glass manufacturing plants is being proposed under authority of Section 112 of the Clean Air Act. The purpose of the proposed standard is to minimize glass manufacturing furnace arsenic emissions to the level which, in the judgment of the Administrator of the U.S. Environmental Protection Agency, provides an ample margin of safety to protect the public health. The standard will have the effect of reducing uncontrolled emissions of arsenic from these furnaces by about 90 percent. Environmental impact and economic impact statements quantifying the impacts of the proposed standard and alternative control options are included in the document.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB84-153238
Environmental Assessment: Source Test and Evaluation Report - Rectisol
Acid Gas Removal
EPA, Research Triangle Park, NC, IERL
TRW, Inc.
K. W. Crawford, R. A. Orsini
Feb 84, 156p, EPA-600/7-84-014, PC A08/MF A01

Abstract: The report gives results of tests of a Rectisol acid gas removal unit at a Texaco refinery. The primary goal was to provide a data base for evaluation of Rectisol performance in entrained coal gasification applications.

CL-ACID	ACIDIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
SS	SOURCE SAMPLING
13	OIL AND GAS EXTRACTION
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB84-154723
Survey of Direct Analysis Methods for Organic Compounds in Particulate Matter
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C. A. Alexander, et al.
Jan 84, 54p, EPA-600/4-84-016, PC A04/MF A01

Abstract: Spark source, secondary ion and direct probe mass spectroscopy and infrared, Raman and photoacoustic optical spectroscopy were evaluated for their present and potential usefulness in direct quantification and semiquantitative analysis of aromatic hydrocarbons in particulate matter.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB84-154798
Review of New Source Performance Standards for Kraft Pulp Mills
EPA, Research Triangle Park, NC, OAQPS
Sep 83, 92p, EPA-450/3-83-017, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
262	PAPER MILLS, EXCEPT BUILDING PAPER
7704-34-9	SULFUR

PB84-155126
Equipment Leaks of VOC (Volatile Organic Compounds) in Natural Gas Production Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, OAQPS
Dec 83, 232p, EPA-450/3-82-024A, PC A11/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
13	OIL AND GAS EXTRACTION

PB84-155233
Polycyclic Aromatic Hydrocarbons: Evaluation of Sources and Effects
National Academy of Sciences
1983, 476 p., PC A21/MF A01
Publication-on-demand, $35.50

Abstract: The present report attempts to make current the information relative to the sources (both mobile and stationary), formation, atmospheric transformations, biologic effects, and pharmacokinetics of a select group of polycyclic aromatic hydrocarbons (PAHs) and mixtures thereof, to identify populations hypersensitive to them and to determine the human risks associated with exposure to them. The specific PAHs considered were chosen on the basis of relative concentrations in various kinds of emission or combustion products or because of some unique pharmacologic property.

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

PB84-155845
Sampling and Analysis Methods for Hazardous Waste Combustion
EPA, Research Triangle Park, NC, IERL
Arthur D. Little, Inc.
J. C. Harris, et al.
Feb 84, 441p, EPA-600/8-84-002, PC A19/MF A01

Abstract: The report is a reference document, describing sampling and analysis methods for measuring the hazardous constituents which might be designated as principal organic hazardous constituents (POHCs) in the various influent and effluent streams of incineration facilities. The methods for these constituents are described in the text. Also included is a concise summary sheet for each recommended method which states the name and number of the method, the types of samples and specific analyses to which the method applies, a brief description of the method, instrument, and operating conditions, and reference(s) to more detailed descriptions of the procedure. Technician-level protocols are thus incorporated by reference, rather than by reproduction in this report. In addition to presenting the methods for sampling and analysis of POHCs at these facilities, information concerning additional sampling and analysis requirements, general strategies for preparing sampling and analysis plans to meet the regulatory requirements, and guidelines for reporting and documentation are discussed.

CL-HAZWAST	HAZARDOUS WASTES
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-156157
Demonstration of Remedial Techniques Against Radon in Houses on Florida Phosphate Lands
EPA, Montgomery, AL, EERF
American Atcon, Inc.
A.G. Scott, and W.O. Findlay
Jul 83, 195p, EPA-520/5-83-009, PC A09/MF A01

Abstract: This report is to document the results of an activity which forms part of a program intended to demonstrate means of controlling indoor radon levels in structures built on Florida phosphate lands. The natural radon content of the soil is elevated in some parts of the Florida phosphate lands, resulting in elevated radon concentrations in the soil gas. If building construction is such as to provide pathways, or routes of entry, between the interior of the building and the soil below, then this radon-bearing soil gas may enter the building and result in elevated indoor levels. This report therefore documents a review of current building practices, with the intention of identifying routes of entry . Based upon this knowledge, certain modifications to building practices may be seen as a means of reducing indoor radon levels.

CL-PHOSPHA	PHOSPHATES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
10043-92-2	RADON
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
52	BUILDING MATERIALS & GARDEN SUPPLIES
7440-61-1	URANIUM

PB84-156264
Wool Fiberglass Insulation Manufacturing Industry - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 83, 576p EPA-450/3-83-002A, PC A25/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
15	GENERAL BUILDING CONTRACTORS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3296	MINERAL WOOL

PB84-156603
Quantitative Relationship Between Mutagenic and Carcinogenic Potencies: A Feasibility Study
National Academy of Sciences
1983, 43 p., PC A03/MF A01
Publication-on-demand, $ 8.50

Abstract: The report discusses (1) the somatic-mutation theory of cancer, (2) the mutagenicity of carcinogenic compounds and (3) the quantitative correlation between mutagenicity and carcinogenicity. The Committee on Chemical Environmental Mutagens concluded that further research and analysis of data are necessary as a basis for determing whether short-term mutagenicity tests possibly can be used for quantitative prediction of human carcinogenicity.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT

PB84-157072
Profile of Existing Hazardous Waste Incineration Facilities and Manufacturers in the United States
EPA, Cincinnati, OH, IERL
MITRE Corp.
E. Keitz, et al.
Feb 84, 167p, EPA-600/2-84-052, PC A08/MF A01

Abstract: A wide variety of technical data pertaining to hazardous waste incinerators has been obtained both from incinerator manufacturers and facilities operating hazardous waste incinerators. This document discusses the data gathering and verification procedures and presents tabulations of the data. It is estimated that there are approximately 350 operational hazardous waste incinerators at 270 facilities in the United States which are subject to regulation under the Resource Conservation and Recovery Act.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-159391
Evaluation of the Feasibility of Incinerating Hazardous Waste in High-Temperature Industrial Processes
EPA, Cincinnati, OH, IERL
PEDCo-Environmental, Inc.
F.D. Hall, et al.
Feb 84, 260p, EPA-600/2-84-049, PC A12/MF A01

Abstract: In the search for disposal alternatives, the U.S. Environmental Protection Agency is evaluating the potential use of high-temperature processes for the incineration of hazardous wastes. Many kinds of waste have already been disposed of in boilers and cement kilns; this report considers the many other potential processes, such as metallurgical furnaces, brick and lime kilns, glass furnaces, and sewage sludge combustors. Each process is examined against such criteria as time/temperature profile, geographical location, product quality considerations, institutional factors, and environmental impacts. Promising alternatives are identified.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-160266
Multimedia Pollution Assessment of the Wood Products Industries
EPA, Cincinnati, OH, IERL
Jordan (Edward C.) Co., Inc.
J. Casana
Feb 84, 296p, EPA-600/2-81-008, PC A13/MF A01

Abstract: This report presents a summary and commentary on pollutants, abatement technologies, and regulations in the wood products industries. Industries included in the study are pulp, paper and paperboard, veneer/plywood, particleboard, millwork and structural members, fabricated wood products, gum and wood chemicals, and wood preserving. Water pollution abatement legislation has established guidelines based on Best Practicable Control Technology Currently Available (BPCTCA). These guidelines primarily address conventional pollutants, including five-day biochemical oxygen demand (BOD5), total suspended solids (TSS) and pH. In addition, guidelines based on Best Available Technology Economically Achievable (BATEA) and Best Conventional Pollutant Control Technology (BCPCT) are currently being established to address conventional, priority (toxic), and nonconventional (neither conventional nor toxic) pollutants. Existing external air pollution control devices, in conjunction with internal process controls, can be effective in the reduction of air pollutants, especially particulates and sulfur dioxide.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
24	LUMBER AND WOOD PRODUCTS
242	SAWMILLS AND PLANING MILLS
2426	HARDWOOD DIMENSION AND FLOORING
243	MILLWORK, PLYWOOD & STRUCTURAL MEMBERS
2435	HARDWOOD VENEER AND PLYWOOD
2436	SOFTWOOD VENEER AND PLYWOOD
249	MISCELLANEOUS WOOD PRODUCTS
2491	WOOD PRESERVING
2492	PARTICLEBOARD
25	FURNITURE AND FIXTURES
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
263	PAPERBOARD MILLS
264	MISC. CONVERTED PAPER PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2861	GUM AND WOOD CHEMICALS
7446-09-5	SULFUR DIOXIDE
7704-34-9	SULFUR

PB84-161421
Gaseous Emissions from Excess Air Combustion of Explosives and Propellants
EPA, Cincinnati, OH, MERL
IT Enviroscience, Inc.
J. Mahannah, et al.
Feb 84, 31p, EPA-600/2-84-051, PC A03/MF A01

Abstract: The purpose of this short-term project was to determine the levels of nitric oxide (NO), nitrogen dioxide (NO2), and carbon monoxide (CO) in the off-gases from the open burning of explosives in excess air. The ultimate goal is to reduce the level of NO(x), CO, and particulates emitted during the destruction of surplus, waste, and off-spec, explosives. Previous work (DOE) showed that a gravel/sand filter in the roof of a bunker reduced the level of particulates emitted during excess air combustion of propellants (only limited NO(x) or CO measurements were reported). The project demonstrated that the filter is effective in partially eliminating NO and CO emissions, but that additional work, including the incorporation of catalysts in the bed and the introduction of NO-control gases (e.g. NH3), should be undertaken.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
10102-43-9	NITRIC OXIDE
10102-44-0	NITROGEN DIOXIDE
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2892	EXPLOSIVES
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
630-08-0	CARBON MONOXIDE

PB84-162841
Feasibility of Assessment of Health Risks from Vapor-Phase Organic Chemicals in Gasoline and Diesel Exhaust
National Academy of Sciences
Oct 83, 68p, PC A04/MF A01
Publication-on-demand, $10.00

Abstract: The Committee was asked to develop a list of organic chemicals identified in the vapor phase in exhaust from diesel- and gasoline-fueled engines and to explore the availability of toxicologic and epidemiologic information on each of them for use in making a quantitative and qualitative assessment of the human health risk associated with exposure to such exhaust. The Committee determined that quantitative risk assessment could probably be applied to only three to five vapor-phase components of diesel exhaust: formaldehyde, benz(a)-anthracene, acrolein, and perhaps 2-nitrofluorene and chrygene. Data on the others seem insufficient for detailed quantitative risk assessment, although comparative risk assessment or qualitative risk assessment would be possible. Readers may find interesting the listings in the appendix of specific chemicals in exhaust of engines as summarized from published literature.

CL-DIESEL	DIESEL FUEL EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
107-02-8	ACROLEIN
218-01-9	CHRYSENE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
50-00-0	FORMALDEHYDE
56-55-3	BENZ(A)ANTHRACENE

PB84-164060
Metallic Mineral Processing Plants - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OHEA
Jan 84, 57p, EPA-450/3-81-009C, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES

PB84-164219

Validation of Chemical and Biological Techniques for Evaluation of Vapors in Ambient Air/Mutagenicity Testing of Twelve (12) Vapor-Phase Compounds

EPA, Research Triangle Park, NC, HERL
Research Triangle Institute
T.J. Hughes, C. Sparacino, S. Frazier

Mar 84, 204p, EPA-600/1-84-005, PC A10/MF A01

Abstract: The overall objective of this research was to further validate Ames mutagenicity preincubation system for detection of vapors in ambient air. Parameters for detection of vapors in the Ames/Salmonella mutagenicity assay were investigated and 12 vapor-phase compounds were tested for mutagenic potential in the above validated protocol with strains TA97, TA98 and TA100, both with and without Aroclor-induced hamster and rat liver S9. The 12 vapor-phase compounds tested were: methylene chloride, formaldehyde, trichloroethylene, ethylene dichloride, epichlorohydrin, nitropropane, nitrobenzene, hydrogen sulfide, butene, propylene, acetylene, and ethylene oxide. Ethylene oxide, epichlorohydrin, ethylene dichloride and methylene chloride were mutagenic.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
106-89-8	EPICHLOROHYDRIN
106-98-9	BUTENE,1-
107-06-2	ETHYLENE DICHLORIDE
115-07-1	PROPYLENE
25167-67-3	BUTENE
50-00-0	FORMALDEHYDE
74-86-2	ACETYLENE
75-09-2	METHYLENE CHLORIDE
75-21-8	ETHYLENE OXIDE
7783-06-4	HYDROGEN SULFIDE
79-01-6	TRICHLOROETHYLENE
79-46-9	NITROPROPANE,2-
98-95-3	NITROBENZENE

PB84-167683

Benzene Emissions from Benzene Storage Tanks: Background Information for Proposal to Withdraw Proposed Standards

EPA, Research Triangle Park, NC, OAQPS

Mar 84, 104p, EPA-450/3-84-004, PC A06/MF A01

Abstract: It is proposed to withdraw the proposed National Emission Standards for Hazardous Air Pollutants for the control of Benzene emissions from Benzene Storage Tanks. Previously, standards had been proposed under Section 112 of the Clean Air Act. This document contains background infor- mation considered in the proposed withdrawal of those previously proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

PB84-169325
Chemical and Physical Characterization of Municipal Sludge Incinerator Emissions
EPA, Research Triangle Park, NC, ESRL
R.L. Bennett, K. T. Knapp, D.L. Duke
Mar 84, 58p, EPA-600/3-84-047, PC A04/MF A01

Abstract: Particulate emissions from a group of municipal sludge incinerators, three with multiple-hearth furnaces and one with a fluidized-bed furnace, were characterized. Objectives of the investigation were (1) to obtain specific elemental emission concentrations, and (2) to provide source inventories and source signatures, especially in terms of particle size, that would assist in the development and evaluation of source apportionment models. Three of the plants investigated in this study operated at or near autogenous burning conditions. Chemical element composition was determined for total and sized emission samples by x-ray fluorescence analysis. During this study considerable enrichment of several elements (S, V, Cu, Zn, Cd, Sn and Pb) in the particulate emissions, relative to their content in the sludge, was observed. The largest average enrichment ratios were observed for cadmium (31), zinc (14), lead (9), and sulfur (8).

CL-SEWSLUD	SEWAGE SLUDGE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-92-1	LEAD POWDER
7440-31-5	TIN, AS SN
7440-43-9	CADMIUM
7440-50-8	COPPER
7440-62-2	VANADIUM
7440-66-6	ZINC
7704-34-9	SULFUR

PB84-170042
Protocol for the Collection and Analysis of Volatile POHCs (Principal Organic Hazardous Constituents) Using VOST (Volatile Organic Sampling Train)
EPA, Research Triangle Park, NC, IERL
Envirodyne Engineers, Inc.
E.M. Hansen
Mar 84, 61p, EPA-600/8-84-007, PC A04/MF A01

Abstract: The document is a state-of-the-art operating protocol for sampling and analysis of volatile organic constituents of flue gas from hazardous waste incinerators or other similar combustor systems using the Volatile Organic Sampling Train (VOST). It is intended to be used for guidance by personnel of the regulatory groups, personnel associated with engineering research and development, and the regulated community. The document is in two parts. Part A describes the key components of the train, the procedures for preparing the sorbent materials, and procedures for sample collection using the VOST. Part B describes the procedures for analyzing VOST sorbent cartridges for volatile principal organic hazardous constituents (POHCs) using purge-trap-desorb gas chromatography/mass spectrometry (P-T-D GC/MS). Quality control procedures are presented in both parts.

AM	AMBIENT MONITORING
CL-HAZWAST	HAZARDOUS WASTES
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-170174
Benzene Emissions from Maleic Anhydride Plants: Background Information for Proposal to Withdraw Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 49p, EPA-450/3-84-002, PC A03/MF A01

Abstract: This document contains information that formed the basis for the decision to withdraw standards proposed for the maleic anhydride industry April 18, 1980 (45 FR 26660). The report includes a summary of industry changes since proposal, a summary of public comments relevant to the withdrawal decision, and the rationale for the decision to withdraw proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

PB84-170182
Carcinogen Assessment of Coke Oven Emissions
EPA, Washington, DC, OHEA
Feb 84, 221p, EPA-600/6-82-003F, PC A10/MF A01

Abstract: Coke oven workers in Allegheny County, Pennsylvania and at 10 non-Allegheny County coke plants in the United States and Canada were found to be at an excess risk of mortality from cancer of all sites and from cancer of the lungs, bronchus, trachea, kidney, and prostate. An important finding of this study was the dose-response found by both length of exposure and intensity of exposure (top or side of the ovens) for mortality from cancer of the lungs, bronchus, and trachea. A study of Japanese coke oven workers also found them to be at an excess risk of lung cancer mortality. British studies of cancer mortality in coke oven workers have generally been negative, but there were weaknesses in these studies. Coke oven emissions produce positive results in mutagenicity studies. Coal tar, a condensate of coke oven emissions, and various constituents of coke oven emissions have been found to be positive in both mutagenicity and animal carcinogenicity studies.

CL-COE	COKE OVEN EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RA	RISK ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
332	IRON AND STEEL FOUNDRIES
8001-58-9	COAL TAR

PB84-170414
Federal Activities in Toxic Substances. Toxic Integration Information Series
EPA, Washington, DC, OPTS
C. Allin, W. Richardson, J.D. Sandler
Sep 83, 361p, EPA-560/TIIS-83-007, PC A16/MF A01

Abstract: Reprint/revision of 1981 document--describes the toxic substances regulatory activities of 22 offices in 8 Federal agencies or departments. The document covers the breakdown of each organization, summarizes the statutory authorities, highlights regulatory development processes, and describes the various toxics-related programs and activities. There is also a graphic summary of 14 major statutes involved with controlling toxic substances.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB84-170570
Residential Wood Combustion Study. Task 1. Ambient Air Quality Impact Analysis
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
J.E. Core, et al.
Sep 82, 49p, EPA-910/9-82-089A, PC A03/MF A01

Abstract: The ambient air quality impact of Residential Wood Combustion (RWC) emissions in eight Pacific Northwest cities was studied during the 1980-81 space heating season. Seventy-seven worst case fine particle ambient samples collected in Seattle, Spokane, Yakima, Tacoma and Longview, Washington; Boise, Idaho; Portland and Medford, Oregon were selected and analyzed for Polynuclear Aromatic Hydrocarbon compounds, 35 trace elements and carbon. The impact of RWC and other sources was determined by Chemical Mass Balance (CMB) calculation and validated against independent carbon-14 measurement. This document describes the project design, methodology and results of the RWC impact monitoring program. The findings of this task form the basis for projections of future RWC impacts discussed under task 2A (PB84-170596) of this series. They also provide the first comprehensive survey of RWC impacts within Pacific Northwest communities during a period likely to be typical of maximum RWC emissions.

CL-IAP INDOOR AIR POLLUTANTS
CL-PM PARTICULATE MATTER
CL-POM POLYCYCLIC ORGANIC MATTER
CL-WOOD WOOD SMOKE
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB84-170588
Residential Wood Combustion Study. Task 1. Ambient Air Quality Impact Analysis. Appendices.
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
J.E. Core, et al.
Sep 82, 207p, EPA-910/9-82-089B, PC A10/MF A01

Abstract: The ambient air quality impact of Residential Wood Combustion (RWC) emissions in eight Pacific Northwest cities was studied during the 1980-81 space heating season. Seventy-seven worst case fine particle ambient samples collected in Seattle, Spokane, Yakima, Tacoma and Longview, Washington; Boise, Idaho; Portland and Medford, Oregon were selected and analyzed for Polynuclear Aromatic Hydrocarbon compounds, 35 trace elements and carbon. The impact of RWC and other sources was determined by Chemical Mass Balance (CMB) calculation and validated against independent carbon-14 measurement. This document contains the appendices for this task. The project design, methodology and results of the RWC impacts monitoring program are described in Report No. PB84-170570. The findings of this task form the basis for projections of future RWC impacts discussed under task 2A (PB84-170596) of this series. They also provide the first comprehensive survey of RWC impacts within Pacific Northwest communities during a period likely to be typical of maximum RWC emissions.

AM AMBIENT MONITORING
CL-IAP INDOOR AIR POLLUTANTS
CL-PM PARTICULATE MATTER
CL-POM POLYCYCLIC ORGANIC MATTER
CL-WOOD WOOD SMOKE
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB84-170596
Residential Wood Combustion Study. Task 2A. Current and Projected Air Quality Impacts
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
J.E. Core, J.A.Cooper, J.E. Houck
Jan 83, 61p, EPA-910/9-82-089C, PC A04/MF A01

Abstract: This report focuses on the issues of future particulate air quality impact from residential wood combustion (RWC) sources in the Pacific Northwest, the basis for the projections, air resource implications and potential mitigating measures. The intent of this task is to draw together the findings from other portions of the Residential Wood Combustion Study: Task 1 (Ambient Air Quality Impact Analysis), Task 2B (Household Information Survey), and Task 3 (Wood Fuel Use Projections) (Report Nos. PB84-170570, PB84-170604, and PB84-170612). Results developed from Task 6 (Control Strategy Alternatives) and Task 5 (Wood Stove Emission Studies) are discussed within the framework of potential mitigating measures (Report Nos. PB84-170653 and PB84-170638). Current RWC particulate impacts identified as a part of this study, as well as those quantified by other Pacific Northwest aerosol studies, are presented as are air quality projection methodology and impact projection implications.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-PM	PARTICULATE MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170604
Residential Wood Combustion Study. Task 2B. Household Information Survey
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Jun 82, 84p, EPA-910/9-82-089D, PC A05/MF A01

Abstract: Surveys on residential wood combustion practices were conducted in the metropolitan areas of Portland, Oregon, and Seattle and Spokane, Washington, in the spring of 1981. These surveys were part of the Residential Wood Combustion study investigating various aspects of the air pollution impact associated with increasing residential wood burning in the Pacific Northwest. The two major goals were to gather specific data on woodburning activities during February 1981, as well as to gather general data on woodburning practices. The interest in woodburning activity during February was because temporary air monitoring stations were operated in the survey areas during that period. Each survey area was selected to include a one-mile square area around the air monitoring stations, so that the survey information could be correlated to the ambient data. The results of this ambient monitoring study are reported under Task 1 of this project PB84-170570. The survey results are summarized in this report, with the data presented in chart form. The survey methodology, the statistical analyses performed, and the problems encountered are discussed.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170612
Residential Wood Combustion Study. Task 3. Wood Fuel Use Projection
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
W.T. Greene, R.L. Gay
Dec 82, 146p, EPA-910/9-82-089E, PC A07/MF A01

Abstract: This report analyzes trends in wood fuel use within the city limits of Seattle and Spokane (Washington) and in the greater Portland (Oregon) metropolitan area. Short-term (through 1985) and long-term (through 2000) trend projections are presented. Short-term projections were made based on volumes of firewood removed from the nearest national forest(s) and average heating season nephelometer light scattering coefficient (Bscat), normalized for temperature and meteorological effects for two sites in the Portland areas and one site in Seattle. For long-term projections of wood fuel use, a state-of-the-art model was adapted and applied to simulate wood fuel use during 1970-2000. This model calibrated well against limited available data on actual wood use. The model projects increasing or decreasing wood fuel use based primarily upon the magnitude of potential fuel cost savings from heating with wood versus other fuels.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170620
Residential Wood Combustion Study. Task 4. Technical Analysis of Wood Stoves: Combustion Principles, Design Considerations, Operating Techniques
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Mar 83, 75p, EPA-910/9-82-089F, PC A04/MF A01

Abstract: Design and operation of residential wood combustion devices influence both performance and emissions. Important design considerations include mechanisms to increase thermal efficiency and improve combustion efficiency. Operator-controlled variables such as fuel, charging rate, and combustion air regulation greatly impact performance and emissions. An overview of general information on fireplaces and woodstove design and operation, based on a literature review, is provided in this report. Basic combustion principles, efficiencies and combustion variables are discussed. The influence of design configurations on combustion with the resultant formation of pollutants is investigated. Modification of the combustion system and the heat transfer mechanism by design or retrofit is explored. The impact of fuel species, fuel moisture content and operational variables are discussed. Techniques for proper stove selection, particularly sizing of the stove for needed heat output, are described. Design parameters and firing techniques recommended to operate a stove or fireplace with minimum emissions are discussed. A bibliography of relevant technical reports is provided.

CL-IAP	INDOOR AIR POLLUTANTS
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170638
Residential Wood Combustion Study. Task 5. Emissions Testing of Wood Stoves, Volumes 1 and 2
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Nov 82, 304p, EPA-910/9-82-089G, PC A14/MF A01

Abstract: This report presents the results of 19 emission tests on four wood stoves and two retrofit emission control devices, conducted during June-October 1981. The objectives of this study were to further identify the effect of wood moisture on stove emissions, to evaluate several inexpensive (simplified) test procedures for assessing particulate emissions, and to define a level of particulate emissions which can be expected from state-of-the-art improved combustion stoves. This study included evaluating previous test data reported in the literature. A single standard operating procedure was used throughout the test program, the objective of which was to maintain a constant heat output rate. A heat output rate corresponding to a relatively moderate to low burn rate (less than 2.5 kg wood/hour) was chosen. A single wood type (Douglas fir) was used throughout the study; wood size was maintained at a consistent level. Throughout the entire test program measurements were made for particulates, carbon monoxide, carbon dioxide, oxygen, and hydrocarbon content of the emissions; the gaseous constituents were monitored continuously. Measurements were made for creosote deposition, opacity, and smoke spot density. Appendixes for this report are contained in Report No. PB84-170646.

CL-PM	PARTICULATE MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
SS	SOURCE SAMPLING
124-38-9	CARBON DIOXIDE
630-08-0	CARBON MONOXIDE

PB84-170646
Residential Wood Combustion Study. Task 5. Emissions Testing of Wood Stoves. Volumes 3 and 4 (Appendices)
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
Nov 82, 353p, EPA-910/9-82-089H, PC A16/MF A01

Abstract: This report contains the appendices for the results of 19 emission tests on four wood stoves and two retrofit emission control devices (reported in PB84-170638). The objectives of the study were to further identify the effect of wood moisture on stove emissions, to evaluate several inexpensive (simplified) test procedures for assessing particulate emissions, and to define a level of particulate emissions which can be expected from state-of-the-art improved combustion stoves. This study included evaluating previous test data reported in the literature. A single standard operating procedure was used throughout the test program, the objective of which was to maintain a constant heat output rate, as monitored by combustion chamber temperature and stove surface temperature. A heat output rate corresponding to a relatively moderate to low burn rate (less than 2.5 kg wood/hour) was chosen. A single wood type (Douglas fir) was used throughout the study; wood size was maintained at a consistent level. Throughout the entire test program measurements were made for particulate, carbon monoxide, carbon dioxide, oxygen, and hydrocarbon content of the emissions; the gaseous constituents were monitored continuously. Measurements were made for creosote deposition, opacity, and smoke spot density.

AM	AMBIENT MONITORING
CL-PM	PARTICULATE MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT

PB84-170653
Residential Wood Combustion. Task 7. Indoor Air Quality
EPA, Seattle, WA, Region X
Green (Del) Associates
J.E. Core, J.A. Cooper, and J.E. Houck
Oct 82, 159p, EPA-910/9-82-089, PC A08/MF A01

Abstract: Indoor exposure to particulate air pollution associated with residential wood combustion was studied in five typical Northwest homes during May, 1980. Particulate mass and polynuclear aromatic hydrocarbon (PNA) species were measured in each home prior to, and during wood appliance use to determine the degree to which indoor particulate mass and PNA concentrations increased. Air infiltration rate information typical of the homes included in the survey were obtained from the literature. Records of wood use and climatic conditions during the indoor sampling period were maintained. Experimental results are compared to other indoor air pollution studies on residential wood combustion and interpreted in relation to typical wood use during cold weather periods associated with greater wood burning activity. Program conclusions relative to appliance operations, design and maintenance are discussed.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB84-171545
Study of the Effectiveness of a Catalytic Combustion Device on a Wood Burning Appliance
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J.M. Allen, W.H. Piispanen, M. Cooke
Mar 84, 47p, EPA-600/7-84-046, PC A03/MF A01

Abstract: The report gives results of operating a wood stove, incorporating a catalytic combustor, while burning air-dried oak at low burning rates. Gas composition was measured continuously both at the entrance of the catalyst (after the gases had left the burning wood) and at the exit of the stove (after the gases had traversed the catalyst). These continuous monitors showed a reduction of about 3:1 in volatile hydrocarbons measured by a flame ionization detector, and a comparable reduction in carbon monoxide. These monitors showed no significant corresponding reduction when the active catalyst was replaced with an identical ceramic element, but without the noble metal coating. Grab samples collected from the flue gas early during the wood burning cycle, analyzed by direct gas-phase MS and GC, confirmed the lower concentrations of volatile combustible species when the active catalyst was used. Integrated samples of flue gas collected throughout the test burn were analyzed for less volatile organic species and PAH species. These analyses indicated that the catalyst was less effective in reducing these species, including particulate collected on a hot filter and high molecular weight species such as BaP.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-172105
Literature Review on Occurrence and Methodology for Determination of Nickel, Chromium, Manganese, and Arsenic Species in Air
EPA, Research Triangle Park, EMSL
Battelle Columbus Labs
R. M. Riggin, E. J. Mezes, W. M. Henry
Mar 84, 56p, EPA-600/4-84-026, PC A04/MF A01

Abstract: A critical literature review of the state of the art for speciation of arsenic, chromium, manganese, and nickel in atmospheric samples was performed. Techniques for distinguishing the compound forms and valence states of these metals were critically assessed. Three basic types of speciation procedures were identified: (a) direct analysis of particulate matter, (b) speciation of inorganic compounds after dissolution, and (c) sequential or selective extraction. Direct analysis techniques offer the possibility of determining specific compounds but are limited in sensitivity. The latter two techniques cannot determine specific inorganic compounds because of the inclusion of a dissolution step. However, such techniques may give useful information and are more generally applicable than direct analysis techniques. In a few cases (e.g., arsine), compounds may exist in the gas phase and can therefore be readily distinguished from other compound forms of the element.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
7439-96-5	MANGANESE
7440-02-0	NICKEL POWDER
7440-38-2	ARSENIC AND COMPOUNDS AS AS
7440-47-3	CHROMIUM

PB84-172493
Assessment of Atmospheric Emissions from Quenching of Blast Furnace Slag with Blast Furnace Blowdown Water
EPA, Research Triangle Park, NC, IERL
PEDCo-Environmental, Inc.
G. Annamraju, W. Kemner, P.J. Schworer
Mar 84, 87p, EPA-600/2-84-072, PC A05/MF A01

Abstract: The report gives results of 15 emission measurements made on a laboratory scale facility simulating typical plant slag quenching practice. The measurements were made to determine if a potential alternative to treatment prior to discharge of blast furnace blowdown water (using it, untreated, to quench blast furnace slag) will significantly increase emissions to the atmosphere. Test parameters included two slag temperatures (593 C and 816 C) and two waters, relatively clean mill service water (total dissolved solids, TDS, = 450 mg/l) and blast furnace blowdown water (TDS = 2500 mg/l). Particulate emissions increased with increasing TDS in the quench water. For the same water, emissions were higher at the higher slag temperature; this trend was more pronounced with the dirtier water. Some organic species were found in the emissions, but there was little correlation with water quality or slag temperature.

CL-ORGANIC	ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB84-175744
Review of New Source Performance Standards for Grain Elevators
EPA, Research Triangle Park, NC, OAQPS
Jan 84, 105p, EPA-450/3-84-001, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
01	AGRICULTURAL PRODUCTION-CROPS
35	MACHINERY, EXCEPT ELECTRICAL
352	FARM AND GARDEN MACHINERY
3523	FARM MACHINERY AND EQUIPMENT

PB84-176874
Benzene Emissions from Ethylbenzene/Styrene Plants - Background Information for Proposal to Withdraw Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 56p, EPA-450/3-84-003, PC A04/MF A01

Abstract: This document contains information that formed the basis for the decision to withdraw standards for the ethylbenzene/styrene industry proposed December 18, 1980 (45 FR 83448). The report includes a summary of industry changes since proposal, a summary of public comments relevant to the withdrawal decision, and the rationale for the decision to withdraw proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

P884-177765
Laboratory Evaluation of Tunable Atomic Line Molecular Spectrometers for Benzene Analysis
EPA, Research Triangle Park, NC, EMSL
D.R. Scott, R.L. Hedgecoke
Apr 84, 43p, EPA-600/4-84-030, PC A03/MF A01

Abstract: Tunable Atomic Line Molecular Spectroscopy (TALMS) is a high resolution, differential absorption technique used in the ultraviolet region. Under Interagency Agreements EPA-80-D-X1014 and AD-89-F-2A008 with Lawrence Berkeley Laboratory, two prototype TALMS instruments were designed, constructed, and delivered to the U.S. EPA at Research Triangle Park, North Carolina. TALMS I (a large laboratory instrument designed to demonstrate the feasibility of TALMS detection of toxic organic compounds), and TALMS II (a more compact monitor for benzene designed for possible field applications) were evaluated in the laboratory for performance characteristics in the analysis of benzene using the 253.7 nm mercury line. The tests included detection limit, precision, effect of temperature (TALMS I), effect of pressure (TALMS II), and interferences from organic compounds other than benzene. They can detect benzene precisely above the detection limit of 6 microgram. The apparent interferences from toluene and pyridine are relatively small and may be artifacts which can be eliminated with improvement in electronic signal processing. It was recommended that changes to the sample cell and electronics be made to improve the detection limit and that extension of the capabilities of TALMS to other organic compounds be made.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
71-43-2	BENZENE

P884-179878
Characterization of Emissions from a Fluidized-Bed Wood Chip Home Heating Furnace
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
R.S. Truesdale
Mar 84, 74p, EPA-600/7-84-038, PC A04/MF A01

Abstract: The report gives results of measurements of emissions from a residential wood-chip combustor, operated in both a fluidized-bed and cyclone-fired mode, and their comparison with those from a conventional woodstove and industrial wood-fired boilers. In general, the combustion efficiency of the fluidized-bed and cyclone-fired wood-chip burner is higher than that of conventional woodstoves. Concomitant with this increase in efficiency is a decrease in most emissions. For the fluidized-bed tests, significant reductions of total hydrocarbons and CO were observed, compared to woodstove emissions. The cyclone test showed PAH levels far below those of conventional woodstoves, approaching levels measured in industrial wood-fired boilers. A baghouse, installed during two fluidized-bed tests, was extremely effective in reducing both particulate and PAH emissions. Method 5 samples from above the fluid bed suggest that appreciable PAH is formed in the upper region of the furnace or in the watertube heat exchangers. In general, the cyclone-fired mode was more effective in reducing emissions from residential wood combustion than the fluidized-bed mode.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
630-08-0	CARBON MONOXIDE

PB84-179951
Review of New Source Performance Standards for Primary Copper Smelters:
Chapters 1 through 9
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 586p, EPA-450/3-83-018A, PC A25/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER

PB84-179969
Review of New Source Performance Standards for Primary Copper Smelters:
Appendices
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 153p, EPA-450/3-83-018B, PC A08/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER

PB84-181825
Final Environmental Impact Statement Synthetic Fiber Production Facilities: Background Information Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 66p, EPA-450/3-82-011B, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
22	TEXTILE MILL PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS

PB84-181882
Analysis of Polynuclear Aromatic Hydrocarbons in Particulate Matter by Luminescence Techniques
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
W. A. Ivancic, et al.
Apr 84, 55p, EPA-600/4-84-003, PC A04/MF A01

Abstract: Fluorescence, phosphorescence, and heavy-metal activated room temperature phosphorescence spectra were obtained for ten polycyclic aromatic hydrocarbon (PAH) reference compounds individually and in mixtures on quartz plates and particulate matter. The results indicate that multi-component analysis of PAHs on airborne particulate matter may be possible with the development of appropriate multicomponent spectral deconvolution procedures. The direct analysis approach in combination with the use of solvent extraction followed by fluorescence analysis can provide a rapid means of analysis for PAHs both within and on the surface of particulate matter. Direct phosphorescence was too weak to be useful at 5-10 micrograms/g levels found in many types of particulate samples. Heavy-metal activated room-temperature phosphorescence appears more sensitive to matrix and substrate effects and less amenable to multi-component analysis than fluorescence. The fluorescence spectrum of benzo(a)pyrene was found to be affected by exposure to low levels of ozone. However, the fluorescence spectrum retains characteristic features that enable identification of the benzo(a)pyrene.

AM	AMBIENT MONITORING
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB84-182369
Approaches to Risk Assessment for Multiple Chemical Exposures
EPA, Cincinnati, OH, ECAO
J.F. Stara, L.S. Erdreich
Mar 84, 288p, EPA-600/9-84-008, PC A13/MF A01

Abstract: The Environmental Criteria and Assessment Office (ECAO) in Cincinnati has developed health risk assessment methods for chronic exposure to a single chemical from a single route of exposure. Risk assessments for carcinogens associated an exposure level with a particular incidence of cancer, using a non-threshold model which is linear at low doses. For systemic toxicants, the no-observed-adverse-effect level (NOAEL)/Uncertainty Factor approach was used to estimate an acceptable daily intake (ADI). In order to develop methods for assessing risk from exposure to mixtures of chemicals, all relevant routes and all exposure durations must be considered. The basis of the single chemical approach is constantly updated to keep pace with developments in pharmacokinetics, species and route extrapolation, mathematical models, additivity and interaction. These and other relevant issues were addressed during a 2-day workshop on 'Approaches to Risk Assessment for Multiple Chemical Exposures' held by the U.S. Environmental Protection Agency in Cincinnati, Ohio on September 29 and 30, 1982. The workshop was attended by 50 scientists from EPA and private industry. This document presents the results of this workshop, including presentations, critiques and discussion for each of the 11 subtopics covered.

CL-CARCIN CARCINOGENS
EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
RA RISK ASSESSMENT

PB84-183102
Determination of a Range of Concern for Mobile Source Emissions of Methanol
EPA, Ann Arbor, MI, OMS
C.A. Harvey
Jul 83, 53p, EPA-AA/TSS-83-6, PC A09/MF A01

Abstract: This paper describes an effort by the Emission Control Technology Division of the Environmental Protection Agency (EPA) to suggest a range of concern for methonanol (CH3OH) emissions from mobile sources. In accordance with Section 202 (a) (4) of the Clean Air Act (CAA) and due to a concern within industry as to what emission levels will be used as the basis for the evaluation of current and future technologies, a methodology was developed in order to bracket a range of concern for various unregulated pollutants. This paper uses the results from two EPA contracts to apply this methodology specifically for an evaluation of methanol. Mathematical models previously designed for various exposure scenarios (such as enclosed spaces, expressways, and street canyons) were used to calculate the ambient air concentrations resulting from a range of potential mobile source methanol emissions. The range of concern for methanol suggested in this report is based on its toxicological properties and not its photochemical reactivity nor any possible carcinogenic effects.

EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT
67-56-1 METHANOL

PB84-183565
Health Assessment Document for 1,1,1-Trichloroethane (Methyl Chloroform)
EPA, Research Triangle Park, NC, ECAO
R. Carchman, et al.
Feb 84, 181p, EPA-600/8-82-003F, PC A09/MF A01

Abstract: Methyl chloroform (MC) is a volatile chlorinated hydrocarbon used extensively as an industrial solvent and in consumer products. It has been detected in the ambient air of a variety of urban and non-urban areas of the United States. In certain instances involving contamination of groundwater, much higher levels have been reported. The weight of available evidence obtained from human and animal data suggest that long-term exposure to environmental levels of MC poses no serious health concern to the general population. No tetratogenic potential has been demonstrated for MC in studies conducted to date in rodent species. Available data are inadequate for reaching firm conclusions about its mutagenic potential in humans. Because of the limited usefulness of the animal bioassays conducted to date, it is not possible to classify MC in regard to its carcinogenic potential in humans.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
71-55-6	TRICHLOROETHANE,1,1,1-

PB84-183649
Immunotoxicity of Air Pollutants
EPA, Research Triangle Park, NC, HERL
J.A. Graham, D.E. Gardner
1984, 48p, EPA-600/D-84-096, PC A03/MF A01

Abstract: The most common ubiquitous air pollutants, as well as some point source (e.g. metals) air pollutants, decrease the function of pulmonary host defense mechanisms against infection. Most of this knowledge is based on animal studies and involves cellular antibacterial defenses such as alveolar macrophages and mucociliary clearance. Information on viral infectivity is more sparse. Since there is no routine treatment for viral infections which have a relatively high rate of occurrence, this gap in knowledge is of concern. Given the major gaps in knowledge, a reasonably accurate assessment of the immunotoxicity of air pollutants is not possible. When the limited data base is reviewed relative to ambient levels of the common pollutants, it appears that acute exposures to O3 and H2SO4 and chronic exposures to NO2 are the major exposures of concern for immunotoxic effects. It is critical to point out, however, that until information is available for chronic exposures to low levels of metals and for exposures to common organic vapors, the immunotoxicity of air pollutants cannot be assessed adequately.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
10028-15-6	OZONE
10102-44-0	NITROGEN DIOXIDE
7446-09-5	SULFUR DIOXIDE
7664-93-9	SULFURIC ACID

PB84-184704
Determination of a Range of Concern for Mobile Source Emissions of Formaldehyde Based Only on Its Toxicological Properties
EPA, Ann Arbor, MI, OMS
P.M. Carey
Jul 83, 63p, EPA-AA-TSS-83-5, PC A04/MF A01

Abstract: This report describes an effort by the Emission Control Technology Division of the Environmental Protection Agency (EPA) to suggest a range of concern for formaldehyde (HCHO) emissions from mobile sources. In accordance with section 202 (a) (4) of the Clean Air Act (CAA) and due to a concern within industry as to what emission levels will be used as the basis for the evaluation of current and future technologies, a methodology was developed in order to bracket a range of concern for various unregulated pollutants. This report coordinates the efforts from two EPA contracts in order to use this methodology specifically for an evaluation of formaldehyde. Mathematical models were previously designed for various exposure scenarios (such as enclosed spaces, expressways, and street canyons). These models were used to calculate the ambient air concentrations resulting from various mobile source formaldehyde emission factors. In conjunction with this, a formaldehyde health effects literature search was conducted to aid in the determination of the suggested range of concern. The results of the analysis suggest a range of concern for ambient formaldehyde concentrations.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
413	INTERCITY HIGHWAY TRANSPORTATION
50-00-0	FORMALDEHYDE

PB84-184902
Laboratory-Scale Flame-Mode Hazardous Waste Thermal Destruction Research
EPA, Cincinnati, OH, IERL
Energy and Environmental Research Corp.
J.C. Kramlich, et al.
Apr 84, 155p, EPA-600/2-84-086, PC A08/MF A01

Abstract: This research is to investigate the flame-mode incinerability of hazardous waste compounds. It was also designed to provide a comparison between flame and non-flame destruction of compounds and act as a guideline for future work on the development of an acceptable incinerability ranking methodology. Two flame reactors were used in order to simulate a wide variety of failure conditions for liquid injection incinerators. The first reactor was called a microspray and consisted of droplets injected into a hydrocarbon flat-flame. The second reactor was a turbulent flame reactor which allowed the investigation of failure conditions in spray flames such as mixing, atomization and quench phenomena. The compounds investigated included: chloroform, 1,2-dichloroethane, benzene, chlorobenzene, and acrylonitrile.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-06-2	ETHYLENE DICHLORIDE
107-13-1	ACRYLONITRILE
108-90-7	MONOCHLOROBENZENE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
67-66-3	CHLOROFORM
71-43-2	BENZENE

PB84-186832
Draft Asbestos Health Assessment Update
EPA, Research Triangle Park, NC, ECAO
W.H. Nicholson
Feb 84, 146p, EPA-600/8-84-003A, PC A07/MF A01

Abstract: Lung cancer and mesothelioma are the most important asbestos-related causes of death among exposed individuals. The accumulated data suggest that the excess risk of lung cancer from asbestos exposure is proportional to the cumulative exposure (the duration times the intensity) and the underlying risk of lung cancer in the absence of exposure. The risk of death from mesothelioma appears to be proportional to the cumulative exposure to asbestos in a given period. Animal studies confirm the human epidemiological results. All major asbestos varieties produce lung cancer and mesothelioma with only limited differences in carcinogenic potency. Some measurements demonstrate that significant asbestos exposure, exceeding 100 times the background, occurs to individuals in non-occupational environments. Currently, the most important of these non-occupational exposures is from the release of fibers from asbestos-containing surfacing materials in schools, auditoriums, and other public buildings or from asbestos fireproofing sprayed in highrise office buildings.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB84-187806
Feasibility Study for Adapting Present Combustion Source Continuous Monitoring Systems to Hazardous Waste Incinerators. Volume 2: Review and Estimation of Incineration Test Conditions
EPA, Research Triangle Park, NC, IERL
GCA Corp.
R. McInnes, et al.
Mar 84, 78p, EPA-600/8-84-011B, PC A05/MF A01

Abstract: This report gives results of an adaptability study of commercially available sample conditioning and measurement systems, in the form of a guidelines document to be used by EPA and industry personnel. As part of EPA-sponsored research programs to investigate sampling and analysis methods for hazardous waste incineration (focused on adapting existing methods for identifying and quantifying constituents listed in 40 CFR 261), the adaptability of existing continuous emission monitoring systems (CEMS) involves such measurement categories as SO2, SO3, NOx, CO, CO2, O2, HCl, and organic materials. Study results indicate that commercially available extractive continuous monitors can be adapted to incinerators through proper sample conditioning. Available CEMS provide the ranges and sensitivities needed to accurately measure concentrations of the organic and inorganic components of interest.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-187814
Feasibility Study for Adapting Present Combustion Source Continuous Monitoring Systems to Hazardous Waste Incinerators. Volume 1: Adaptability Study and Guidelines Document
EPA, Research Triangle Park, NC, IERL
GCA Corp.
J. Podlenski, et al.
Mar 84, 88p, EPA-600/8-84-011A, PC A05/MF A01

Abstract: The report gives results of an adaptability study of commercially available sample conditioning and measurement systems, in the form of a guidelines document to be used by EPA and industry personnel. As part of EPA-sponsored research programs to investigate sampling and analysis methods for hazardous waste incineration (focused on adapting existing methods for identifying and quantifying constituents listed in 40 CFR 261), the adaptability of existing continuous emission monitoring systems (CEMS) involves such measurement categories as SO2, SO3, NOx, CO, CO2, O2, HCl, and organic materials. Study results indicate that commercially available extractive continuous monitors can be adapted to incinerators through proper sample conditioning. Available CEMS provide the ranges and sensitivities needed to accurately measure concentrations of the organic and inorganic components of interest.

CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-189646
Method for Collection and Analysis of Chlorobenzenes
EPA, Research Triangle Park, NC, ESRL
Monsanto Research Corp.
G.W. Wooten, et al.
May 84, 48p, EPA-600/3-84-058, PC A03/MF A01

Abstract: To measure ambient concentrations and individual exposure to potentially hazardous chlorinated organic compounds, analytical methodology using absorbent-based samplers (passive exposure devices) and gas chromatographic techniques were developed. The samplers selectively absorb and concentrate chlorinated organics and other organic compounds diffusing into the solid absorbent. Analysis is carried out by desorption of the trapped compounds by heating, separation by gas chromatography and detection using a Hall detector for the chlorinated organics. Sampling and analytical techniques were evaluated under laboratory conditions with low concentrations of gaseous compounds and optimized for detection and quantitation. The samplers and analytical techniques are capable of detecting subparts-per-billion concentrations of test compounds after one-half hour exposure.

AM	AMBIENT MONITORING
CL-CHC	CHLORINATED HYDROCARBONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
108-90-7	MONOCHLOROBENZENE
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
56-23-5	CARBON TETRACHLORIDE
67-66-3	CHLOROFORM

PB84-189851
Controlled Air Incineration of Pentachlorophenol-Treated Wood
EPA, Cincinnati, OH, IERL
Los Alamos National Lab
L.A. Stretz, J.S. Vavruska
May 84, 110p, EPA-600/2-84-089, PC A06/MF A01

Abstract: This research was initiated to determine the operating conditions necessary to effect complete thermal destruction (greater than 99.99%) of pentachlorophenol (PCP)-treated wood in a controlled air incinerator (CAI) and to provide a basis for evaluating the applicability of other incineration systems to the destruction of PCP-treated wood. The treated wood in question was scrap from used ammunition crates in Korea. It has been proposed that a substantial amount of such wood be disposed of by incineration in a unit located in that country. A major concern in such incineration is the potential formation of such toxic compounds as chlorinated dibenzo-p-dioxins and dibenzofurans. Test results showed a combustion efficiency of >99.99% for PCP in the primary chamber under test conditions with no detectable production of tetrachlorodibenzo-p-dioxin (TCDD) or tetrachlorodibenzofuran (TCDF) at detection limits in sample extracts of 1 and 5 ppb, respectively.

CL-DIOXIN	DIOXINS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
24	LUMBER AND WOOD PRODUCTS
244	WOOD CONTAINERS
2441	NAILED WOOD BOXES AND SHOOK
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
87-86-5	PENTACHLOROPHENOL

PB84-190735
Evaluation of Sampling Methods for Gaseous Atmospheric Samples
EPA, Research Triangle Park, NC, ESRL
Research Triangle Institute
E.D. Pellizzari, et al.
May 84, 294p, EPA-600/3-84-062, PC A13/MF A01

Abstract: A research program was conducted to test and evaluate several alternatives for collecting and transferring samples from the collection site to the laboratory for the analysis of a variety of toxic organic pollutants by gas chromatography (GC). Sample storage media included three types of polymeric bags (FEP Teflon, Tedlar, five-layered aluminized bags), glass bulbs, electropolished and Summa polished cannisters, Tenax GC and charcoal cartridges, and nickel cryogenic traps. Twenty-seven test compounds including hydrocarbons, aromatics, halogenated hydrocarbons, halogenated aromatics, and oxygen, nitrogen and sulfur-containing compounds were used to test the storage media. Dynamically flowing mixtures of these gases were synthesized using a specially designed permeation/dilution system. Quantitative stability tests were conducted with the remaining storage media at one concentration level, nominally 50 ppb, for the same 15 chemicals. The stability tests were conducted over a 7 day storage period. The potential effect of inorganic gases as interferences during the collection of test compounds was quantitatively studied.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB84-190891
Health Assessment Document for Inorganic Arsenic
EPA, Research Triangle Park, NC, ECAO
D. Jacobson-Kram, et al.
Mar 84, 350p, EPA-600/8-83-021F, PC A15/MF A01

Abstract: Inorganic arsenic, predominantly the tri- and pentavalent forms, is emitted to the environment primarily through smelting activity, biocide use and glass manufacturing. Monitoring data indicate a concentration of equal to or less than 0.1 microgram/cu m for most locations. Major routes of absorption of inorganic arsenic in the general population are inhalation and ingestion. Inhaled inorganic arsenic deposited in the lungs is eventually absorbed. Most ingested soluble inorganic arsenic is absorbed; insoluble forms pass through the gastrointestinal tract with negligible absorption. Inorganic arsenic metabolism in man is complicated by biotransformation processes which include the methylation and oxidation-reduction interconversion of inorganic arsenic. Long-term accumulation of inorganic arsenic does not generally occur in physiologically active compartments in the body; renal clearance appears to be the major route of excretion of absorbed inorganic arsenic. Acute symptoms of inorganic arsenic poisoning include severe gastrointestinal damage, facial edema, cardiovascular reactions, peripheral nervous system disturbances, and hematopoietic system effects. General population concerns arising from long-term exposures to moderate levels of inorganic arsenic include respiratory and skin cancer, neuro/cardiovascular effects.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
3211	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
3221	GLASS CONTAINERS
3229	PRESSED AND BLOWN GLASS, NEC
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3333	PRIMARY ZINC
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB84-191543
Environmental Impact Statement for Lime Manufacturing Plants: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 49p, EPA-450/3-84-008, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME

PB84-191584
Residential Wood and Coal Combustion. Task 3. Health Effects Literature Search
EPA, Research Triangle Park, NC., OAQPS
Green (Del) Associates
B. Burton, and A. Senzel
Feb 84, 88p, EPA-450/5-83-005C, PC A05/MF A01

Abstract: This report is a compilation of titles and abstracts which is the result of a literature search for information on adverse health effects due to air emissions (indoor or outdoor) from the residential combustion of coal and wood. Abstracts are presented alphabetically according to the first author's surname. This search included the files of the Combustion Research Branch, Industrial Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Park, N.C.; and Environmental Technology Division, Del Green Associates, Inc., Woodburn, Oregon, which has recently completed a residential wood combustion study for U.S. EPA Region X and the State of Oregon. In addition, an on-line computer literature search was performed, covering the following data bases: Biological Abstracts (BIOSIS, 1975+), National Technical Information Service (NTIS), and Excerpta Medica (1976+).

CL-PM	PARTICULATE MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB84-192673
Relationship Between Indoor Radon and Lung Cancer: A Study of Feasibility of an Epidemiological Study
EPA, Washington, DC
Massachusetts Inst. of Tech.
S. Rasmussen, et al.
1981, 62p, PC A04/MF A01

Abstract: This report describes a study to assess the feasibility of an epidemiologic investigation of the relationship between residential radon exposure and lung cancer. Field measurements of residential radon levels in the State of Maine are described. Using these radon measurements and BEIR, 1980 risk assessments, it is estimated that at most 10% of lung cancers in Maine can be considered attributable to residential radon exposure. Calculations are made of sample sizes necessary for a case-control study of radon and lung cancer, for several levels of radon and smoking health effects. The effects of misclassification of exposure variables on the probability of detecting a radon health effect are discussed. A comparison is made of three different mathematical models which could be used for sample size estimation. Dollar cost estimates are given for conducting an epidemiologic case-control study of the relationship between residential radon exposure and lung cancer.

EPA	ENVIRONMENTAL PROTECTION AGENCY
ES	EPIDEMIOLOGY STUDY
IA	INDOOR AIR
10043-92-2	RADON
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB84-194604
Removal of Polynuclear Aromatic Hydrocarbons from Primary Aluminum Air Pollution Control Scrubber Wastewater
EPA, Cincinnati, OH, IERL
Rexnord, Inc.
C.R. Dempsey, K.A. Dostal, R.A. Osantowski
May 84, 20p, EPA-600/D-84-135, PC A02/MF A01

Abstract: A pilot-scale study was conducted at a primary aluminum plant to evaluate the removal of benzo(a)pyrene and other polynuclear aromatic hydrocarbons (PAH's) from potline scrubber wastewater. Specific objectives included determining the need for granular activated carbon to remove the PAH's to 10 micrograms/1 and evaluating the use of benzo(a)pyrene as an indicator for the removal of all PAH's.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
50-32-8	BENZO(A)PYRENE

PB84-195403
Temperature-Dependent Collection Efficiency of a Cryogenic Trap for Trace-Level Volatile Organic Compounds
EPA, Research Triangle Park, NC, EMSL
Northrop Services, Inc.
J.D. Pleil, W.A. McClenny
May 84, 19p, EPA-600/D-84-133, PC A02/MF A01

Abstract: Reduced temperature preconcentration of volatile organic compounds in a packed trap is examined experimentally as a function of trapping temperatures ranging from -180C to +100C. Trapped compounds are thermally desorbed into a capillary column-equipped gas chromatograph and quantified with a flame ionization detector. Data sets are presented for 21 compounds of environmental interest at various concentrations (in dry zero air) in the range of 0.1 ppbv to 100 ppbv. Measured chromatographic peak areas increase from a low but non-zero value for high trap-temperature runs to a constant value as the trap temperature is lowered. Extrapolated Clausius-Clapeyron equations are shown to be a useful guide in estimating the trap temperature required for 99% collection efficiency.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

P884-197144
Residential Wood Combustion. Task 6. Control Strategy Analysis
EPA, Seattle, WA, Region X
Green (Del) Associates
R.L. Gay and W.T. Green
Apr 83, 291p, EPA-910/9-82-0891, PC A13/MF A01

Abstract: This study developed and evaluated a comprehensive list of alternative strategies for controlling the ambient air quality impact of residential wood combustion (RWC) in the Pacific Northwest. Over seventy-five control strategy elements were initially evaluated, using a Keppner-Tregoe evaluation process, which included five minimum (MUST) criteria and twelve desirable (WANT) criteria. Twenty generic strategy approaches were evaluated, using available published information an extensive assumptions, to estimate their potential ability to reduce RWC particulate emissions. Based on the findings of these analyses, fifteen RWC control strategies were selected and evaluated using the Keppner-Tregoe process. Rough estimates of implementation costs were made. A matrix summary of the fifteen strategies was prepared showing their relative ranking based on all twelve WANT criteria, their estimated costs, and benefits in terms of estimated particulate emission reduction potential.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

P884-198001
Current Intelligence Bulletin 40, 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD, 'dioxin')
National Institute of Occupational Safety and Health
Jan 84, 26p, PC A03/MF A01
NIOSH PUB No. 84-104, AVAIL NIOSH

Abstract: In animals, 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD, 'dioxin') causes various systemic effects at a wide range of exposure concentrations, including tumorigenesis, immunological dysfunction, and teratogenesis. Studies of humans exposed to TCDD-contaminated materials suggest that TCDD is the cause of observed chloracne, metabolic disorders (porphyria), and other systemic problems and are suggestive of TCDD's ability to cause cancer. TCDD occurs as a contaminant of materials such as 2,4,5-trichlorophenol (TCP), 2,4,5-trichlorophenoxyacetic acid (2,4,5-T), and 2-(2,4,5-trichlorophenoxy)propionic acid (silvex). Occupational exposure may occur through contact with these materials during use or from the past contamination of worksites. The National Institute for Occupational Safety and Health (NIOSH) recommends that TCDD be regarded as a potential occupational carcinogen, that occupational exposure to TCDD be controlled to the fullest extent feasible, and that decontamination measures be used for TCDD-contaminated work environments.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
93-72-1	SILVEX
93-76-5	TRICHLOROPHENOXYACETICACID,2,4,5-
95-95-4	TRICHLOROPHENOL,2,4,5-

PB84-198019
Current Intelligence Bulletin 41, 1,3-Butadiene CH2-CH-CH=CH2
National Institute of Occupational Safety and Health
Feb 84, 61p, PC A04/MF A01
NIOSH PUB No. 84-105, AVAIL NIOSH

Abstract: Inhalation exposure of rats and mice to 1,3-butadiene induced a carcinogenic response at multiple sites. Mammary fibroadenomas/carcinomas, uterine sarcomas, Leydig cell adenomas of the testes, thyroid follicular cell adenomas, exocrine tumors of the pancreas, and Zymbal gland carcinomas were identified in rats exposed at concentrations of 1,000 or 8,000 ppm of 1,3-butadiene. Mice exposed to 625 or 1,250 ppm of 1,3-butadiene developed a high incidence of malignant lymphomas; an increased incidence of other tumors, including hemangiosarcomas; and testicular and ovarian atrophy. The offspring of pregnant rats exposed to 1,3-butadiene at 8,000 ppm had major skeletal defects. In addition, fetal toxicity was observed when pregnant dams were exposed to 200 ppm, 1,000 ppm, and 8,000 ppm. Epidemiological studies of workers employed in facilities producing styrene-butadiene rubber indicated an increased, but not statistically significant, risk of mortality from neoplasms of the lymphatic and hematopoietic tissues and from leukemia.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
106-99-0	BUTADIENE,1,3-
30	RUBBER AND MISC. PLASTICS PRODUCTS

PB84-199033
Control of Wood Stove Emissions Using Improved Secondary Combustion
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
J.M. Allen, W.H. Piispanen
May 84, 49p, EPA-600/7-84-061, PC A03/MF A01

Abstract: The report gives results of the operation of two wood stoves in the laboratory with simultaneous on-line chemical analysis of the gases entering the secondary combustion zone and those leaving the stove. (NOTE: Self-initiating secondary combustion in wood stoves is encouraged by designs that introduce additional heated air and turbulence to the primary combustion products. This can be very effective in reducing CO and hydrocarbon emissions at high burning rates. At low burning rates, the effectiveness is limited by low temperatures, inadequate mixing, and thermal quenching by the primary air which bypasses the wood.) Stove modifications providing increased temperatures and improved mixing in the secondary combustion zone in a small box stove resulted in minor improvements in secondary burning. The continued burning of CO in the secondary zone was not greatly affected. In a large side-draft stove, with effective secondary burning at high burning rates, the secondary burning at low rates was not effective at any air flow distribution available to the operator.

CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
630-08-0	CARBON MONOXIDE

PB84-199371
Evaluation of the Efficiency of Industrial Flares: Test Results
EPA, Research Triangle Park, NC, IERL
Energy and Environmental Research Corp.
J.H. Pohl, R. Payne, J. Lee
May 84, 194p, EPA-600/2-84-095, PC A09/MF A01

Abstract: The report gives results of Phases 3 and 4 of a four-phase research program to quantify emissions from, and efficiencies of, industrial flares. Phase 1 consisted of the experimental design; Phase 2, the design of the test facilities; Phase 3, development of the test facilities; and Phase 4, data collection and analysis. The combustion efficiency of large pilot-scale flares was measured. The flame structure and combustion efficiencies were correlated with operating conditions of the flare, the size of the flare head, and properties of the flared gases. The combustion efficiency was correlated with the ratio of heating value of the gas flared to the heating value required to maintain a stable flame, and was independent of the flame head size. In turn, the heating value required to maintain a stable flame was correlated with the reciprocal of an estimated flame temperature based on properties of the flared gas. The length of the flame, entrainment into the flame, and liftoff distances were also correlated, using combinations of the Richardson Number, jet theory, and properties of the flared gas.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2899	CHEMICAL PREPARATIONS, NEC

PB84-199785
Epidemiological Study of the Incidence of Cancer as Related to Industrial Emissions in Contra Costa County, California
EPA, Research Triangle Park, NC, HERL
California Department of Health Services, Emeryville
D.F. Austin, et al.
Jun 84, 79p, EPA-600/1-84-008, PC A05/MF A01

Abstract: The purpose of this study was to examine the relationship of lung cancer incidence in Contra Costa County to ambient levels of air pollution. It was suspected that the presence of heavy industry in the county could be a contributing factor. Air pollution patterns were determined by five permanent air monitoring stations and ten temporary stations which monitored the levels of 12 air pollutants for a period of one year. By correlating the 1970-79 lung cancer rates for each census tract and tract levels of air pollution constituents, a statistically significant relationship between ambient air SO4 and lung cancer in males, but not in females, was found. However, when adjusted for the percent of the working population categorized as blue collar, the association was eliminated. An interview study of 249 cases and 373 controls was then conducted. Demographic, work history, residential history, dietary, and smoking history questions comprised the bulk of the data collected. Analysis indicated that the major contribution to lung cancer in the county was due to cigarette smoking. No significant association between lung cancer risk and measured constituents of air pollution was found. Of five broad occupational categories, none had any significant relationship to lung cancer.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING

PB84-199793
In situ Field Portable Fine Particle Measuring Device
EPA, Research Triangle Park, NC, IERL
Particle Measuring Systems, Inc.
R.G. Knollenberg
May 84, 228p, EPA-600/2-84-096, PC A11/MF A01

Abstract: The report describes the design, development, and testing of an in situ fine particle measuring device--the Fine Particle Stack Spectrometer System (FPSSS). It is a laser-fed optical system with detection by near-forward light scattering. Sample volume is established by a high-resolution optical system that views particle images in a dark field through a masked beam splitter. The FPSSS covers an 0.5 to 11.0 micrometer size range with 60-channel resolution. Absolute theoretical accuracy is + or -20% of size for completely unknown refractive index. The FPSSS is designed to operate continuously at in-stack temperatures up to 250C at flow velocities up to 30m/sec. It has been laboratory characterized and field tested on coal-fired power plants at both the inlets and outlets of control devices. Its performance indicates good agreement with impactors and excellent agreement with opacity meters in computed mass loading and optical opacity. Its size resolution is greater than other currently known techniques. Its eventual use will be directed at characterizing particulate emissions of stacks or other stationary sources and qualitatively evaluating the performance and collection efficiencies of particular control devices now in operation.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB84-200609
Locating and Estimating Air Emissions from Sources of Acrylonitrile
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Mar 84, 70p, EPA-450/4-84-007A, PC A04/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with acrylonitrile. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of acrylonitrile and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit acrylonitrile, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE

PB84-200617
Locating and Estimating Air Emissions from Sources of Chloroform
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 102p, EPA-450/4-84-007C, PC A06/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with chloroform. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of chloroform and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chloroform, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
67-66-3	CHLOROFORM

PB84-200625
Locating and Estimating Air Emissions from Sources of Carbon Tetrachloride
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 128p, EPA-450/4-84-007B, PC A07/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with carbon tetrachloride. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of chloroform and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chloroform, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY
56-23-5 CARBON TETRACHLORIDE

PB84-200633
Locating and Estimating Air Emissions from Sources of Formaldehyde
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 128p, EPA-450/4-84-007E, PC A07/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with formaldehyde. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of formaldehyde and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chloroform, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chloroform release into the air from each operation.

EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY
50-00-0 FORMALDEHYDE

PB84-200666
Correlation of Coal Properties with Environmental Control Technology Needs for Sulfur and Trace Elements
EPA, Research Triangle, NC, IERL
Radian Corp.
D.M. White, et al.
Jun 84, 358p, EPA-600/7-84-066, PC A16/MF A01

Abstract: The report reviews existing reports and data on the occurrence of sulfur and trace elements in U.S. coals and on the effect of coal properties on trace element partitioning during coal use. Emphasis was on: (1) the effect of depositional conditions on the formation and composition of mineral matter in coal, (2) the elemental concentration of major and trace elements in U.S. coals as a function of rank and geographic location, (3) analytical methods used for evaluating the modes of occurrence of these elements in coal, (4) conceptual models for predicting sulfur and trace element occurrence as a function of depositional conditions and chemical equilibrium, and (5) the fate of major and trace elements during coal cleaning, combustion, gasification, and waste disposal. Coal washability data for 44 U.S. coal samples were used to statistically estimate the trace element reduction potential for coal as a function of sulfur and ash reduction. Data fits were especially good for elements associated with the clay minerals, and to a lesser extent with the sulfides. Coal combustion data from 15 previous studies at commercial power plants were also analyzed; but, due to differences in technological processes at various plants, possible analytical errors, and limited data, statistical correlations are uncertain.

CT CONTROL TECHNOLOGY DOCUMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
7704-34-9 SULFUR

PB84-206515
Review of Recent Research In Indoor Air Quality
EPA, Research Triangle Park, NC, IERL
Research Triangle Inst.
E.R. Kashdan, J.E. Sickles, and M.B. Ranade
May 84, 183p, EPA-600/2-84-099, PC A09/MF A01

Abstract: The report reviews indoor air quality research in an effort to define the state-of-the-art. Several approaches were taken: (1) about 150 recent journal articles, symposium presentations, and bibliographic reports were reviewed and are presented in an annotated bibliography, arranged by subject; (2) about 30 prominent researchers in indoor air quality were contacted, and contacts are summarized; and (3) significant articles (prior to 1980) were reviewed and are listed in a separate unannnotated bibliography. The information in the annotated bibliography and contact summaries is summarized. The report briefly discusses the quality and apparent deficiencies of the reviewed data base of articles, reports, and books.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB84-206523
Use of Portable Instrumentation for the Monitoring of Fugitive Organic Emissions from Hazardous Waste Incinerators
EPA, Research Triangle Park, NC, IERL
Little (Arthur D.), Inc.
C.H. Summers, A.C. Roche, K.E. Thrun
May 84, 57p, EPA-600/2-84-103, PC A04/MF A01

Abstract: The report gives results of evaluations and tests of currently available portable instrumentation used to monitor fugitive organic emissions generated by the transfer and storage of liquid wastes during the operation of hazardous waste incinerators. Relevant current methodologies were evaluated, and results and recommendations of the evaluations were tested. The evaluation of current methodologies for portable volatile organic compound (VOC) monitors, with regard to their applicability in monitoring fugitive organic emissions from hazardous waste incinerators, was completed and is documented as Appendix A of the report. The recommendation was to perform a limited field test with two photoionization analyzers (PIDs) at an operating liquid waste incinerator. A portable flame ionization detector (FID) (for which considerable prior data exists) was to be the reference. Most of the report discusses field tests of the evaluation results at the Cincinnati Municipal Sewer District's incinerator. Test data indicate that, for this application, either a PID containing a 10.2 eV light source or a FID is suitable.

CL-HAZWAST	HAZARDOUS WASTES
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-207638
Impacts of Coal Combustion on Trace Elements in the Environment: Wisconsin Power Plant Impact Study
EPA, Duluth, MN, ERL
Wisconsin University-Madison
P.A. Helmke, et al.
Jun 84, 114p, EPA-600/3-84-070, PC A06/MF A01

Abstract: The impact of a modern coal-fired generating station on the environment, with emphasis on the concentrations and behavior of elements and the disposal of fly ash, was determined by analysis of aerosolic dust, oak leaves, aquatic organisms, water, fly ash, and coal. The major analytical techniques used were neutron activation analysis, x-ray fluorescence analysis, atomic absorption spectrophotometry, electron microscopy, and x-ray diffraction. Calcium, Ba, B, and Th concentrations were relatively high in the fly ash produced. When mixed with water, the fly ash reacts to form a cement-like material that includes pozzolanic mineral phases that were identified by x-ray diffraction and electron microscopy. Aerosolic dust collected in fallout buckets was enrined with Br, Hg, Sb, Se, Th, U, and Zn. Of the organisms tested, Asellus racovitzai and Odanata were most suitable for monitoring ecosystem trace element fluxes. Barium, Cr, Sc, and possibly Sb concentrations were higher in specimens of these organisms exposed to the ash effluent than in control specimens. These increases cannot be attributed to seasonal variability, sample contamination or differences in specimen size and are therefore thought to result from exposure of the organisms to ash effluent.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES

PB84-209477
Benzene Emissions from Coke By-Product Recovery Plants - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
May 84, 356p, EPA-450/3-83-016A, PC A16/MF A01

Abstract: National emission standards to control emissions of benzene from new and existing coke by-product recovery plants are being proposed under Section 112 of the Clean Air Act. This document contains information on the background and authority, regulatory alternatives considered, and environmental and economic impacts of the regulatory alternatives.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
71-43-2	BENZENE

PB84-210046
Passive Sampling Device for Ambient Air and Personal Monitoring
EPA, Research Triangle Park, NC, EMSL
Monsanto Co.
G. W. Wooten, et al.
Jun 84, 72p, EPA-600/4-84-050, PC A04/MF A01

Abstract: A high performance passive dosimeter has been developed and evaluated as a monitor for volatile organics in ambient air and for short-term, low-level personal monitoring applications. The dosimeter design was dictated by three major areas of concern: (1) diffusive mass transport considerations; (2) sorbent selection, and (3) chemical quantitation of the collected compounds, which intimately involves desorption procedures of the passive device.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB84-210301
Benzene Fugitive Emissions - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC OAQPS
Jun 82, 234p, EPA-450/3-80-032B, PC A11/MF A01

Abstract: A national emission standard for the control of fugitive emissions of benzene from the petroleum refining and organic chemical manufacturing industries is being promulgated under Section 112 of the Clean Air Act (42 U.S.C. 7412, as amended). This standard will limit fugitive emissions of benzene from existing and new equipment in benzene service. This document summarizes the responses to public comments received on the proposed standards and also summarizes the basis for changes made in the standards since proposal.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

PB84-210988
Locating and Estimating Air Emissions from Sources of Nickel
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Mar 84, 188p, EPA-450/4-84-007F, PC A09/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with nickel. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of nickel and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit nickel, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for nickel release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
7440-02-0	NICKEL POWDER

PB84-212224
Waste Crankcase Oil Heater Study: Phase 2. Organic and Inorganic Speciation Analyses
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
M. Cooke, et al.
Jul 84, 66p, EPA-600/7-84-072, PC A04/MF A01

Abstract: The report gives results of measurements of specific chemical species in emissions from two waste-oil-fired commercial heaters. The species were identified earlier in a Level 1 analysis of similar emissions. One heater utilized a vaporizing pot, and the other, an air atomization combustion chamber. Polynuclear aromatic hydrocarbons (PAHs) were analyzed in gaseous emissions from both units. Elemental analyses (including Pb, Fe, Cd, Zn, Cl, and Br) were performed on the air atomization discharges. Analyses also were conducted on these emissions to measure possible organolead constituents and to determine the distribution of iron oxidation states (Fe(II) versus Fe(III)). Also, several waste crankcase oils were tested for the elemental species of interest to set baseline levels for emission data and to determine the effect on metal concentrations of both filtration and sedimentation during storage. Elevated levels of PAHs were found in emissions from both heaters. Elevated levels of metallic species also were found, and Fe(III) was determined to be the major form of iron in combustion emissions from the waste-oil-fired air atomization heater. Since combinations of certain PAHs and Fe(III) have been shown to promote certain types of mammalian cancers, these results indicate a potentially serious health hazard.

CL-FUELOIL	WASTE DERIVED FUEL OIL EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
1332-37-2	IRON OXIDE
15438-31-0	IRON
7439-92-1	LEAD POWDER
7440-43-9	CADMIUM
7440-66-6	ZINC
7726-95-6	BROMINE
7782-50-5	CHLORINE

PB84-213958
Chemical Activities Status Report. Fourth Edition, Volume I.
EPA, WASHINGTON, DC, OPTS
E.T. Merrick
Feb 84, 426p, EPA-560/TIIS-84-001A, PC A19/MF A01

Abstract: The EPA Chemical Activities Status Report (EPACASR) is a compilation of EPA activities relating to chemical substances. Types of documents or activities listed in the data base include technical assistance information, preregulatory assessments, chemical and biological testing programs, and monitoring programs, both completed and in progress.l Chemical-specific regulatory activities under the Clean Air Act; Clean Water Act; Safe Drinking Water Act; Federal Insecticide, Fungicide, and Rodenticide Act; Toxic Substances Control Act; Resource Conservation and Recovery Act; Superfund; Atomic Energy Act; and Energy Research and Development Act are also listed. Volume I provides names and synonyms for chemicals included in the data base, both alphabetically and by CAS registry number. Volume II (P884-213966) contains brief descriptions of EPA activities relating to each chemical. See also entry "EPACASR Tapes."

AM	AMBIENT MONITORING
CL-HAZWAST	HAZARDOUS WASTES
CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
PRA	PRE-REGULATORY ASSESSMENT
RDG	REG DEVELOPMNT GUIDE
TT	TOXICITY TESTING

PB84-213966
Chemical Activities Status Report. Fourth Edition, Volume II.
EPA, Washington, DC, OPTS
E.T. Merrick
FEB 84, 725P., EPA-560/TIIS-84-001B, PC A99/MF E04

Abstract: The EPA Chemical Activities Status Report (EPACASR) is a compilation of EPA activities relating to chemical substances. Types of documents or activities listed in the data base include technical assistance information, preregulatory assessments, chemical and biological testing programs, and monitoring programs, both completed and in progress. Chemical-specific regulatory activities under the Clean Air Act; Clean Water Act; Safe Drinking Water Act; Federal Insecticide, Fungicide, and Rodenticide Act; Toxic Substances Control Act; Resource Conservation and Recovery Act; Superfund; Atomic Energy Act; and Energy Research and Development Act are also listed. Volume I (PB84-213958) provides names and synonyms for chemicals included in the data base, both alphabetically and by CAS registry number. Volume II contains brief descriptions of EPA activities relating to each chemical. See also entry "EPACASR tapes."

AM	AMBIENT MONITORING
CL-HAZWAST	HAZARDOUS WASTES
CL-INORGAN	INORGANIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
PRA	PRE-REGULATORY ASSESSMENT
RDG	REG DEVELOPMNT GUIDE
TT	TOXICITY TESTING

PB84-214006
Distillation Operations in Synthetic Organic Chemical Manufacturing - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 83, 395p, EPA-450/3-83-005A, PC A17/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS

PB84-215730
Paper Production and Processing - Occupational Exposure and Environmental Release Study
EPA, Cincinnati, OH, IERL
S-Cubed
R. Soklow
Jul 84, 656p, EPA-600/2-84-120, PC A99/MF A01

Abstract: This report presents an analysis of chemicals and processes used during the production and processing of paper and paper goods with emphasis on the workplace exposure and environmental release of chemicals from these operations. Reviews of chemical substances in this report are intended for use in developing realistic exposure and release scenarios associated with the review of new chemical substances used in the industry. In this report, a description of the industry is presented along with profiles of the various process subcategories occurring in the industry. Literature search and discussions with knowledgable persons in the industry during the development of this report have been aimed at developing process descriptions that address occupational exposures to workers, as well as information on the concentration of the release of chemicals to the environment. Process characteristics for each study area, including raw materials and chemicals used are presented along with the description of chemicals in wastestreams and other effluent characteristics. Discussion of waste control and treatment technologies used throughout the industry are also presented. The sources, effects and control of worker exposure to chemicals are described on an industry-wide basis.

CL-IAP	INDOOR AIR POLLUTANTS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
26	PAPER AND ALLIED PRODUCTS
262	PAPER MILLS, EXCEPT BUILDING PAPER
2621	PAPER MILLS, EXCEPT BUILDING PAPER

PB84-219666/REB
Flexible Vinyl and Urethane Coating and Printing - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Jun 84, 78p, EPA-450/3-81-016B, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written which contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. Also, it contains the final environmental impact statement, which summarizes the standard's impact. Finally, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
27	PRINTING AND PUBLISHING
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
285	PAINTS AND ALLIED PRODUCTS
2851	PAINTS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2893	PRINTING INK
73	BUSINESS SERVICES
733	MAILING, REPRODUCTION, STENOGRAPHIC

PB84-220268
Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins. Parts
1 and 2, External Review Draft
EPA, Cincinnati, OH, ECAO
May 84, 592p, EPA-600/8-84-014A, PC A25/MF A01

Abstract: Dioxins are a class of compounds that contain the dibenzo-p-dioxin nucleus. In the chlorinated dioxins, the dibenzo-p-dioxin nucleus is substituted with chlorine at different positions of the fused benzene rings. Depending on the number and position of chlorine substitution, 75 congeners are possible for the chlorinated dioxins. This document deals with the most toxic chlorinated dioxins, namely, 2,3,7,8-tetra- chloro-, 1,2,3,7,8-penta-chloro-, 1,2,3,6,7,8-hexachloro-, and 1,2,3,-7,8,9-hexachlorodibenzo-p-dioxin. Of these four congeners, the 2,3,7,- 8-tetrachlorodibenzo-p-dioxin has been studied extensively. This compound is often described in both popular and technical literature as 'TCDD' or simply 'dioxin'. A few documents exist at the present time that deal with selected aspects of polychlorinated dibenzo-p-dioxins in the environmental media. This document has been prepared to provide a comprehensive multi-media assessment of the analytical methodologies, environmental levels and ecological and health effects of the four chlorinated dioxins mentioned above.

CL-DIOXIN	DIOXINS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB84-224401
Candidate Sampling and Analysis Methods for 21 Suspect Carcinogens in Combustion Emissions
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
M. Cooke, et al.
Jul 84, 187p, EPA-600/7-84-078, PC A09/MF A01

Abstract: The report identifies candidate sampling and analysis methods for 21 suspect carcinogens in conventional coal and fuel oil combustion emissions. The methods were selected from an extensive review of existing techniques used to determine the substances in air and other matrices. In addition to identifying specific methods for each suspect carcinogen, the report describes a comprehensive sampling and analysis protocol which can be used to determine 13 of the suspect carcinogens. Costs for the separate candidate methods and for the comprehensive protocol are also provided.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB84-224518/REB
Mobile Source Exposure Estimation
EPA, Ann Arbor, MI, OMS
Southwest Research Institute
M.N. Ingalls
Mar 84, 136p, EPA-460/3-84-004, PC A07/MF A01

Abstract: This project was conducted to provide a national exposure, in terms of person hours, to non-reactive mobile source pollutants. The basis for the estimate was the EPA 'NAAQS Exposure Model' (NEM) as applied to carbon monoxide, supplemented by four mobile source microenvironments: parking garages, street canyons, on-expressways, and roadway tunnels. From previous studies, both published and unpublished, CO concentration distributions and national population estimates, by hour of the day, for each of these mobile source microenvironments were developed. That information was combined to determine national exposure in the microenvironments. By using the mobile source CO emission factor, exposure to mobile source pollutants based on a pollutant emission rate of one gram per minute was determined for each of the microenvironments and the environments covered by the NEM. The methodology for using this information to determine exposure to any mobile source pollutant, regulated or unregulated, was explained.

CL-DIESEL	DIESEL FUEL EMISSIONS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
630-08-0	CARBON MONOXIDE
75	AUTO REPAIR, SERVICES, AND GARAGES
752	AUTOMOBILE PARKING
7525	PARKING STRUCTURES

PB84-226935/REB
Evaluation of Hazardous Waste Incineration in Cement Kilns at San Juan Cement Company
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
J.A. Peters, et al.
Aug 84, 235p, EPA-600/2-84-129, PC A11/MF A01

Abstract: Cement kiln incineration of chlorinated liquid organic wastes was investigated in a 5-month demonstration program at San Juan Cement Company in Puerto Rico. Chlorinated monocarbon compounds (POHC's) were monitored in the waste and emissions, and the fate of added chlorine in cement production was determined. Seven levels of percent chlorine in the waste were burned at ten different waste feed rates. Extensive sampling and analysis was conducted to look for the potential presence of polychlorinated dibenzodioxins (PCDD's) and polychlorinated dibenzofurans (PCDF'S). The destruction and removal efficiencies (DRE) of the POHC's ranged from 91.043 percent to 99.997 percent, with only 6 percent of the DRE's greater than 99.99 percent. Poor DRE results were attributed to the absence of waste atomization and the difficult incinerability of chlorinated monocarbon compounds. It was found that about 82 percent of the input chlorine appeared in the cement clinker. The amount of chlorine appearing in the baghouse dust varied from 5 percent to 26 percent of total chlorine input. The total absorption of the HCl formed averaged 99.7 percent in seven tests. PCDD's and PCDF's were not produced at detectable levels when the cement plant was operating normally.

CL-CHC	CHLORINATED HYDROCARBONS
CL-DIOXIN	DIOXINS
CL-HAZWAST	HAZARDOUS WASTES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-226976/REB
Use of Short-Term Genotoxic Bioassays in the Evaluation of Unregulated Automobile Emissions
EPA, Research Triangle Park, NC, HERL
Litton Bionetics, Inc.
D.J. Brusick, R.R. Young, D.R. Jagannath
Aug 83, 127p, EPA-600/1-84-011, PC A07/MF A01

Abstract: Exposure to fuels and fuel additives may occur through direct exposure to uncombusted fuel or fuel additives as well as to products of fuel/fuel-additive combustion. Presence of combustion products in ambient air is the major source of human exposure to motor vehicle fuels. The levels of several products of fuel combustion in ambient air (sulfur oxides, nitrogen oxides, fuel hydrocarbons and carbon monoxide) are currently regulated under the Clean Air Act Amendments (202(2)(4)) of 1977, which also specify that new vehicles shall not be certified if they generate unregulated emissions which present a potential risk to human health. The objectives of this document are to review the data from selected short-term in vitro and in vivo bioassays to (a) determine if there is evidence suggesting potential human health risk either from uncombusted emissions or from emissions of combusted motor vehicle fuels or fuel additives, (b) identify the operational variables involved in generating products of concern for human health, (c) determine the probable nature of the health effects of concern, (d) estimate the ability of short-term tests to establish human risk estimates and (e) develop a short-term bioassay program to monitor the health effects of fuel/fuel additives and unregulated combustion emissions.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
10024-97-2	NITROUS OXIDE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
412	TAXICABS
413	INTERCITY HIGHWAY TRANSPORTATION
414	TRANSPORTATION CHARTER SERVICE
415	SCHOOL BUSES
630-08-0	CARBON MONOXIDE

PB84-226992/REB
Selected Approaches to Risk Assessment for Multiple Chemical Exposures: Progress Report on Guideline Development at ECAO
EPA, Cincinnati, OH, ECAO
J.F. Stara, L.S. Erdreich
Jun 84, 117p, EPA-600/9-84-014A, PC A06/MF A01

Abstract: This report summarizes the second of a series of workshop meetings on methods for assessing human health risks from exposure to chemical mixtures sponsored by the Environmental Criteria and Assessment Office (ECAO) of the U.S. Environmental Protection Agency, July 12-13, 1983. The first workshop 'Approaches to Risk Assessment for Multiple Chemical Exposures' held in September, 1982 provided a basis for selecting methods to develop into risk assessment guidelines. Five issues were reviewed at this meeting: (1) inter-species conversion of dose and duration of exposure, (2) assessment of risk for less than lifetime exposure to carcinogens and to other toxicants, (3) additivity model for chemical mixtures, (4) methods for determination of acceptable daily intakes from quantal of continuous data, and (5) pharmacokinetic basis of route-to-route conversions. Working groups also produced recommendations for approaches to four additional problems: consideration of high risk subgroups, assessment of multiple routes of exposure, ranking the severity of effects and the use of exposure and monitoring data in health risk assessment. A symposium on this methodology is planned for the fall of 1984.

EPA ENVIRONMENTAL PROTECTION AGENCY
RA RISK ASSESSMENT
RDG REG DEVELOPMNT GUIDE

PB84-227008/REB
Selected Approaches to Risk Assessment for Multiple Chemical Exposures: Appendix
EPA, Cincinnati, OH, ECAO
J.F. Stara, L.S. Erdreich
Jun 84, 162p, EPA-600/9-84-014B, PC A08/MF A01

Abstract: This appendix to 'Selected Approaches to Risk Assessment for Multiple Chemical Mixtures: Progress Report on Guideline Development at ECAO-Cin' contains post-meeting comments on the issues sent by the peer reviewers of the workshop, plus selected references pertaining to the guidelines. All pertinent comments have been addressed in the primary report.

EPA ENVIRONMENTAL PROTECTION AGENCY
RA RISK ASSESSMENT
RDG REG DEVELOPMNT GUIDE

PB84-229673/REB
Development of a Portable Monitor for Detection of Toxic Organic Compounds
EPA, Research Triangle Park, NC, EMSL
California University, Berkeley
T. Hadeishi, et al.
Aug 84, 68p, EPA-600/4-84-073, PC A04/MF A01

Abstract: A dual beam prototype instrument was designed, constructed, tested, and delivered to the Environmental Monitoring Systems Laboratory, Research Triangle Park, North Carolina, in December 1983. It was designed for monitoring benzene with the Hg 253.7 nm line using the TALMS (tunable atomic line molecular spectrometer) technique. The instrument consisted of three units: the optical unit (weight: 52 lbs), the electronics unit (weight: 16 lbs), and a power supply (weight: 14 lbs). Tests of the performance of the benzene monitor showed linear response from the detection limit of approximately 40 to 3000 ppm-v. Searches for locations of potential TALMS signals in o-, m-, p-xylenes, bromobenzene, benzene and aniline were carried out. TALMS signals were found for p-xylene with Si, Co, and Sb lines at 252.9 nm. No signals were found at this wavelength for o- or m-xylenes. TALMS signals were also found for bromobenzene at 270.2 nm (Pt) and 266.5 nm (Fe) and aniline at 293.8 (Bi). It is recommended that further searches be carried out to extend the potential of the TALMS technique to other organic compounds and to decrease its detection limit for benzene. The use of a new related technique, Atomic Line Molecular Spectroscopy (ALMS), is also recommended.

AM AMBIENT MONITORING
EPA ENVIRONMENTAL PROTECTION AGENCY
1330-20-7 XYLENE
62-53-3 ANILINE
71-43-2 BENZENE

PB84-229954
Health Assessment Document for Manganese
EPA, Cincinnati, OH, ECAO
H. Bilinski, et al.
Aug 84, 353p, EPA-600/8-83-013F, PC A16/MF A01

Abstract: The document evaluates data on occurrence, sources, and transport of manganese in the environment and data on metabolism, pharmacokinetics, laboratory toxicological and epidemiologic studies to determine the nature and dose response relationship of potential health effects on humans. Nationwide air sampling data indicate that mean manganese concentrations have declined from 0.11 micrograms per cu. m. in 1953-1957 to 0.033 micrograms per cu. m. in 1982. The effects of major concern to humans exposed to manganese are on neurological and on pulmonary function. The CNS effects have been observed in humans at exposure levels above 5 mg/cu. m. and are incapacitating and generally irreversible. Data are equivocal between 1 and 5 mg/cu. m. but suggest decreased prevalence. There are no reports of these effects below 0.3 mg/cu. m. exposure. Pneumonia and chronic bronchitis occur at levels which are associated with neurological effects. Reduced lung function has been reported in children exposed to an estimated 3-11 micrograms per cu. m. from emission of a ferromanganese plant. However, studies of workers exposed to 40 micrograms per cu. m. did not show respiratory symptoms. Animal studies qualitatively support pulmonary effects of manganese exposure. Respiratory symptoms are considered the critical effect based on available data.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3313	ELECTROMETALLURGICAL PRODUCTS
7439-96-5	MANGANESE

PB84-230044/REB
Evaluation of Hazardous Waste Incineration in a Lime Kiln: Rockwell Lime Company
EPA, Cincinnati, OH, IERL
Monsanto Research Corp.
D.R. Day, L.A. Cox
Aug 84, 153p, EPA-600/2-84-132, PC A08/MF A01

Abstract: During a one-week test burn, hazardous waste was used as supplemental fuel and co-fired with petroleum coke in a lime kiln in eastern Wisconsin. Detailed sampling and analysis was conducted on the stack gas for principal organic hazardous constituents (POHCs), particulates, particulate metals, HCl, SO2, NOx, CO, and THC and on process streams for metals and chlorine. POHCs were also analyzed in the waste fuel. Sampling was conducted during three baseline and five waste fuel test burn days. The program objectives were to determine the destruction and removal efficiency (DRE) for each POHC, determine concentration of stack gas pollutants under baseline and waste fuel test burn conditions, determine the fate of chlorine, sulfur, and trace metals in the kiln process, and evaluate kiln performance when operating with hazardous waste as supplemental fuel. Results show average DRE's greater than 99.99 percent for each POHC and little change in pollutant emissions from baseline to waste fuel test conditions. In addition, material balance results show that 95 percent of chlorine enters the process from the limestone feed and the chlorine exits the kiln in the baghouse dust and lime product at 61 percent and 38 percent, respectively.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3274	LIME
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE
7647-01-0	HYDROGEN CHLORIDE

PB84-231075/REB
Evaluation of Air Pollution Regulatory Strategies for Gasoline Marketing Industry
EPA, Research Triangle Park, NC, OAQPS
Jul 84, 692p, EPA-450/3-84-012A, PC A99/MF E03

Abstract: The gasoline marketing industry (bulk terminals, bulk plants, service station storage tanks, and service station vehicle refueling operations) emits to the atmosphere several organic compounds of concern. These include: volatile organic compounds (VOC), which contribute to ozone formation; benzene, which has been listed as a hazardous air pollutant based on human evidence of carcinogenicity; and ethylene dichloride (EDC), ethylene dibromide (EDB), and gasoline vapors, for which there is animal evidence of carcinogenicity. This report contains an analysis of the health, emission, cost, and economic impacts of several regulatory strategies for addressing organic compound emissions from gasoline marketing sources. The regulatory strategies considered are: (1) service station controls (Stage II) for vehicle refueling emissions only in areas requiring additional VOC control to attain the national ozone ambient standard; (2) service station controls (Stage II) for vehicle refueling emissions on a nationwide basis; (3) onboard vehicle controls for vehicle refueling emissions on a nationwide basis; (4) bulk terminal, bulk plant, and service station storage tank controls on a nationwide basis; and (5) various permutations and combinations of these alternatives.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
SA	SOURCE ASSESSMENT
10028-15-6	OZONE
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
71-43-2	BENZENE

PB84-231083/REB
Evaluation of Air Pollution Regulatory Strategies for Gasoline Marketing Industry - Executive Summary
EPA, Research Triangle Park, NC, OAQPS
Jul 84, 46p, EPA-450/3-84-012B, PC A03/MF A01

Abstract: The gasoline marketing industry emits to the atmosphere several organic compounds of concern. These include: volatile organic compounds (VOC), which contribute to ozone formation; benzene, which has been listed as a hazardous air pollutant based on human evidence of carcinogenicity; and ethylene dichloride (EDC), ethylene dibromide (EDB), and gasoline vapors, for which there is animal evidence of carcinogenicity. This report contains a summary of the analysis conducted concerning the health, emission, cost, and economic impacts of several regulatory strategies for addressing organic compound emissions from gasoline marketing sources. (The full report is contained in EPA Document PB84-231075.) The regulatory strategies evaluated are: (1) service station controls (Stage II) for vehicle refueling emissions only in areas requiring additional VOC control to attain the national ozone ambient standard; (2) service station controls (Stage II) for vehicle refueling emissions on a nationwide basis; (3) onboard vehicle controls for vehicle refueling emissions on a nationwide basis; (4) bulk terminal, bulk plant, and service station storage tank controls on a nationwide basis; and (5) various combinations of these alternatives.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
10028-15-6	OZONE
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
51	WHOLESALE TRADE-NONDURABLE GOODS
517	PETROLEUM AND PETROLEUM PRODUCTS
5171	PETROLEUM BULK STATIONS & TERMINALS
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
71-43-2	BENZENE

PB84-231232/REB
Nonindustrial Sources of Potentially Toxic Substances and Their Applicability to Source Apportionment Methods
EPA, Research Triangle Park, NC, OAQPS
G.E. Weant, G.S. McCormick
May 84, 97p, EPA-450/4-84-003, PC A05/MF A01

Abstract: Receptor models have been successfully used for the source apportionment of pariculate matter. Based on this past success, an extension of the models to other pollutants, such as organic toxic substances, is desirable and may be possible. However, much additional work must be performed to account for the reactivities of many of the organic substances. Until the reactivities of the organic substances are considered in the receptor models, source apportionment of the reactive organic substances by exisiting receptor models is not practicable. This project examined this extension of the receptor models and collected data on the emission sources of potentially toxic substances.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
08	FORESTRY
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB84-232487/REB
Determination of the Thermal Decomposition Properties of 20 Selected Hazardous Organic Compounds
EPA, Cincinnati, OH, IERL
Dayton University, OH
B. Delinger, et al.
Aug 84, 204p, EPA-600/2-84-138, PC A10/MF A01

Abstract: Laboratory determined thermal decomposition profiles and kinetic data for a list of 20 selected hazardous organic compounds are reported. All data were obtained in flowing air at mean gas-phase, high-temperature zone residence times ranging from one to six seconds. The extrapolated temperatures required for 99.99% destruction of the parent compound at two seconds mean residence time, T(99.99)(2), ranged from 600C for 1,1,1-trichloroethane to 950C for acetonitrile. The process and parameters potentially controlling incineration efficiency are discussed, and four previously proposed methods of ranking compound incinerability are critically reviewed.

CL-HAZWAST	HAZARDOUS WASTES
CL-ORGANIC	ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-233295/REB
New and Revised Health Effects Test Guidelines, October 1984
EPA, Washington, DC, OPTS
Oct 84, 89p, EPA-560/6-84-002, PC A05/MF A01

Abstract: These documents constitute a set of 2 new health effects test guidelines as well as 3 existing health effects test guidelines that had been subjected to major revision. These will be added to (new guidelines) and serve as substitutes for (revised guidelines) the health effects test guidelines published by NTIS in October, 1982.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB84-234525/REB
Incineration and Treatment of Hazardous Waste: Proceedings of the Ninth Annual Research Symposium Held at Ft. Mitchell, Kentucky on May 2-4, 1983
EPA, Cincinnati, OH, IERL
Jul 84, 330p, EPA-600/9-84-015, PC A15/MF A01

Abstract: The Ninth Annual Research Symposium on land disposal, incineration and treatment of hazardous waste was held in Ft. Mitchell, Kentucky, on May 2, 3 and 4, 1983. The purposes of the symposium were (1) to provide a forum for state-of-the-art review and discussion of ongoing and recently completed research projects dealing with land disposal, incineration, and treatment of hazardous wastes; (2) to bring together people concerned with hazardous waste management who can benefit from an exchange of ideas and information; (3) to provide an area for the peer review of the Solid and Hazardous Waste Research Division's and the Energy Pollution Control Division's research programs on hazardous waste management. These Proceedings are a compilation of papers presented by the symposium speakers. The seven technical areas covered were: Incineration Emissions Measurement Methods, Lab Scale and Pilot Scale Thermal Decomposition Research, Evaluation of Emissions from Full-Scale Hazardous Waste Incienerators, Hazardous Waste Incineration in High Temperature Industrial Processes - Boilers & Kilns, Methods for Conducting Environmental and Economic Assessment of Hazardous Waste Incinerators, Innovative Hazardous Waste Control Technology, and Biological Degradation of Hazardous Waste.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB84-237320
VOC Emissions from Volatile Organic Liquid Storage Tanks - Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Jul 84, 267p, EPA-450/3-81-003A, PC A12/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3272	CONCRETE PRODUCTS, NEC

PB84-239193
Locating and Estimating Air Emissions from Sources of Ethylene Dichloride
EPA, Research Triangle Park, NC, OAQPS
GCA Corp.
Mar 84, 97p, EPA-450/4-84-007D, PC A05/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with ethylene dichloride. Its intended audience includes Federal, State, and local air pollution personnel and others interested in locating potential emitters of ethylene dichloride and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit ethylene dichloride, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for ethylene dichloride release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-06-2	ETHYLENE DICHLORIDE

PB84-239425/REB
Demonstration of Vapor Control Technology for Gasoline Loading of Barges
EPA, Research Triangle Park, NC, IERL
MSA Research Corp.
S.S. Gross
Aug 84, 65p, EPA-600/2-84-140, PC A04/MF A01

Abstract: The report gives results of a program to demonstrate a safe cost-effective way to control gasoline vapors emitted during barge loading. Refrigeration, carbon adsorption, oil absorption, and incineration were reviewed in terms of their safety, economics, and performance. Two barge terminals were used as the design basis for extending their existing truck loading vapor control systems (oil absorption and incineration) to include the barge loading facilities. Although fabrication drawings were prepared for both terminals, the barge vapor collection system was installed only at the terminal using incineration. Arrangements were also made to lease a barge with vapor collection piping and add equipment to reduce the likelihood of barge explosion or overfill. However, before start-up of the demonstration, the program was curtailed. The system is still in place and could be considered for future field demonstrations.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
29	PETROLEUM AND COAL PRODUCTS
42	TRUCKING AND WAREHOUSING
44	WATER TRANSPORTATION

PB84-240811
Toxicity Testing: Strategies to Determine Needs and Priorities
National Academy of Sciences
Feb 84, 389p, PC A17/MF A01
ISBN 0-309-03433-7, $22.50

Abstract: A 'select universe' of 65,725 substances that are of possible concern to the National Toxicity Program because of their potential for human exposure was identified. Through a random sampling process, 675 substances covering seven major intended-use categories were selected. From this sample, a subsample of 100 substances was selected by screening for the presence of at least some toxicity information. In-depth examination of this subsample led to the conclusion that enough toxicity and exposure information is available for a complete health-hazard assessment to be conducted on only a small fraction of the subsample. On the great majority of the substances, data considered to be essential for conducting a health-hazard assessment are lacking. By inference, similar conclusions were made for the select universe from which the sample and the subsample were drawn. This report presents criteria for selecting substances and determining toxicity-testing needs, provides estimates of those needs, and describes some useful criteria for assigning priorities for toxicity testing.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RDG	REG DEVELOPMNT GUIDE

PB84-245273/REB
Compilation of Air Toxic and Trace Metal Summary Statistics
EPA, Research Triangle Park, NC, OAQPS
W.F. Hunt, Jr., R.B. Faoro, G.M. Duggan
Jul 84, 177p, EPA-450/4-84-015, PC A09/MF A01

Abstract: The report summarized both air toxic data compiled by Dr. Hanwant B. Singh of SRI International and selected trace metal and benzo(a)pyrene data contained on the National Aerometric Data Bank's (NADB) Storage and Retrieval of Aerometric Data (SAROAD). The pollutants that are summarized are listed in Tables 1 and 2. Table 1 is a list of 37 priority chemicals under assessment as potential carcinogens (Type A pollutants), while Table 2 lists 50 additional chemicals that are under assessment (Type B pollutants). Of the 37 pollutants listed in Table 1, data were obtained on 24 pollutants. This compares with finding information on only 17 of the 50 additional chemicals. In addition to the above pollutants, arsenic and benzene are summarized in Attachment A. Emphasis has been placed on obtaining long-term averages to match the concern with chronic long-term exposure of human populations to these pollutants. A long-term averaging time may be appropriate for known and suspected carcinogens depending on the compounds ability to induce significant health impacts.

AM	AMBIENT MONITORING
CL-METAL	METALLIC COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
50-32-8	BENZO(A)PYRENE
71-43-2	BENZENE
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB84-246404/REB
Evaluation of Waterborne Radon Impact on Indoor Air Quality and Assessment of Control Options
EPA, Research Triangle Park, NC, IERL
Envirodyne Engineers, Inc.
A.P. Becker,III, and T.M. Lachajczyk
Sep 84, 146p, EPA-600/7-84-093, PC A07/MF A01

Abstract: This research program was conducted with two objectives: (1) evaluation of waterborne radon impacts on indoor air quality, and (2) assessment of available control technologies to limit indoor exposures to radon and its decay products. This report contains a review of radon's physical, chemical and radiological properties; a summary of its decay chain; and a synopsis of health risks, existing regulations, and recommendations concerning exposure to radon and progeny. This report also presents assessments of reported techniques for removal of radon from water or indoor air. Techniques evaluated for removal of radon from water include decay, aeration and granular activated carbon. Techniques evaluated for removal of radon and/or progeny from air include circulation, various types of ventilation, filtration, electrostatic precipitation, charcoal adsorption, chemical reaction, and space charging. Where the reports examined include a sufficient amount of information to do so, an evaluation of the cost, efficiency and practicality of each technique is provided.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
10043-92-2	RADON
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB84-922905
Carcinogenic Risk from Air Pollution by Engine Exhaust and Fuel Evaporation
National Cancer Institute
Aug 84, 115p, NCI/ICRDB/OK-84/05, PC $11.00/MF A01

Abstract: This ONCOLOGY OVERVIEW on the carcinogenic risk from air pollution by engine exhaust and fuel evaporation includes abstracts from the CANCERLIT data base, referencing articles published mainly from 1976 through mid-1983. These abstracts are currently available in the CANCERLIT computerized data base. The strategy used to retrieve these abstracts can be requested from the CIDAC office and entered on any MEDLARS/MEDLINE terminal system to update references in this area. This OVERVIEW encompasses epidemiologies, animal carcinogenicity and cell transformation studies, mutagenicity tests, metabolism studies, environmental levels, selected analytical techniques, and general reviews. The emphasis of the laboratory studies has been place on 'real exhaust' samples. The search strategy used did not generate a comprehensive set of abstracts on work with pure components of engine exhaust, so the assessment of the included representatives of this type of work should be given less weight than the other studies. Tests of pure fuel additives were give relatively more coverage than pure exhaust components which also enter the same environment from other combustion processes.

CL-CARCIN	CARCINOGENS
NCI	NATIONAL CANCER INSTITUTE
RA	RISK ASSESSMENT

PB84-922907
Enzymatic Activation and Detoxication of Polycyclic Aromatic Hydrocarbons
National Cancer Institute
Aug 84, 171p, NCI/ICRDG/OK-84/07, PC$14.00/MF A01

Abstract: Oncology overviews are a service of the International Cancer Research Data Bank (ICRDB) Program of the National Cancer Institute, intended to facilitate and promote the exchange of information between cancer scientists by keeping them aware of literature related to their research being published by other laboratories throughout the world. Each oncology overview represents a survey of the literature associated with a selected area of cancer research. It contains abstracts of articles which have been selected and organized by researchers associated with the field. Contents: Cytochrome P-450 induced oxygenation of polycyclic aromatic hydrocarbons; Carcinogenic activity of polycyclic aromatic hydrocarbon metabolites; Epoxide hydrolases; Glutathione-s-transferase; UDP-glucuronyl transferases; Reviews.

CL-POM	POLYCYCLIC ORGANIC MATTER
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB85 173573/XAB
Control of Air Contaminants in Tire Manufacturing
National Institute of Occupational Safety and Health
May 84, 138p, NIOSH PUB No. 84-111 UNAVAIL NIOSH, PC A07/MF A01

Abstract: Based up a series of seven field studies and the associated in-depth plant reports, this report recommends approaches for the control of air contaminants in tire manufacturing plants. Because manufacturing operations vary, the application of these recommendations requires sound professional judgement. The control of air contaminants in industry is an interdisciplinary task which requires expertise in a number of different professions. Sections II, III, and IV stress this point. This report is organized into four sections and five appendices. Sections II and III are the heart of the report. Section II concerns observed engineering controls and observed effectiveness of those controls. Section III discusses specific work practices. Sections I and IV present an introduction and specific research recommendations based on field studies, respectively. In the course of this study, controls were discussed and then selected for study on the basis of good design. A more detailed study of these controls showed that work practices and maintenance significantly affect a control's performance. The information gained during this study confirms there is more to a control of air contaminants than just "good engineering."

CT	CONTROL TECHNOLOGY DOCUMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
3011	TIRES AND INNER TUBES

PB85-103018/REB
Workshop Proceedings: Approaches for Improving the Assessment of Human Genetic Risk-Human Biomonitoring
EPA, Washington, DC, OHEA
J.R. Fowle, III
Aug 84, 95p, EPA-600/9-84-016, PC A04/MF A01

Abstract: Federal laws require a consideration of adverse health effects, including mutagenicity, in arriving at regulatory decisions on chemical substances. Certain laws require balancing the consequences of these risks with the benefits provided by the use of chemical substances. This requires that risk be quantitatively assessed. Estimates of human genetic risk can be made indirectly based on data from animal experimentation and human somatic cells, but it is not practical to estimate genetic risk directly based on data from human germ cells. The indirect estimates are highly debated because of uncertainties about interspecies and interorgan extrapolations. Uncertainties in extrapolating from effects observed in animals at high experimental doses to effects likely to occur in humans at much lower environmental levels further complicate genetic risk assessment. Comparative studies are needed to define the relationships between somatic cell and germ cell events and between experimental animals and humans. This may involve selecting at least one high risk human population for study. These efforts will require a long-term coordination of efforts among the Federal agencies and among government agencies, industrial concerns, and the academic community.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

PB85-105336/REB
Characterization of Emissions from the Combustion of Wood and Alternative Fuels in a Residential Woodstove
EPA, Research Triangle Park, NC, IERL
Research Triangle Institute
R.S. Truesdale, et al.
Sep 84, 143p, EPA-600/7-84-094, PC A07/MF A01

Abstract: The report gives results of a comparison of emissions from the combustion of alternative fuels to those from wood in a residential woodstove, and of a study of the effects of woodstove operating parameters on combustion emissions. Overall, oak wood is the best fuel tested, considering both emissions and stove operation. Compressed wood logs with binders and bituminous coal produce the highest emissions of SO2, particulate, and NOx. Compressed wood logs without binders and treated lumber produce the highest PAH emissions. Important parameters affecting CO emission levels are fuel structure and, to a lesser degree, combustion air flow. SO2 emission levels are related directly to fuel sulfur content. NOx emissions are controlled by fuel nitrogen content and combustion air flow rate. Organic emissions are affected by fuel consumption rate, fuel structure, and the amount of air through the stove. Total discharge severities for PAHs measured during this study indicate that PAHs are the pollutants of highest concern in the flue gas effluent stream. PAH formation is affected by combustion air flow, firebox temperature, and fuel structure. Bioassay results indicate the presence of both mutagens and promutagens in the organic extracts of flue gas samples from both wood and coal combustion tests.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10102-43-9	NITRIC OXIDE
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE

PB85-105880/REB
Environmental Characterization of Disposal of Waste Oils by Combustion in Small Commercial Boilers
EPA, Cincinnati, OH, IERL
GCA Corp.
P.F. Fennelly, et al.
Sep 84, 177p, EPA-600/2-84-150, PC A09/MF A01

Abstract: In this project, air emission tests were conducted on seven boilers in the size range 0.4 to 15 x 10 to the 6th power Btu/hr while these boilers were firing waste oil. The main purpose of the project was to document the extent to which chemical contaminants in waste oil are destroyed during the combustion process. These data are of interest because one of the more common and widespread practices for disposing of waste oils is burning as a supplemental fuel. Chemicals which were spiked into the waste oil before combustion included: chloroform, 1,1,1-trichloroethane, trichloroethylene, tetrachloroethylene, trichlorobenzene, 1-chloronaphthalene, 2,4,5-trichlorophenol, chlorotoluene.

CL-FUELOIL	WASTE DERIVED FUEL OIL EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
100-44-7	BENZYL CHLORIDE
106-43-4	CHLOROTOLUENE,P-
108-41-8	CHLOROTOLUENE,M-
12002-48-1	TRICHLOROBENZENE
127-18-4	TETRACHLOROETHYLENE
67-66-3	CHLOROFORM
71-55-6	TRICHLOROETHANE,1,1,1-
79-01-6	TRICHLOROETHYLENE
90-13-1	NAPHTHALENE,1-CHLORO-,
95-49-8	CHLOROTOLUENE,O-
95-95-4	TRICHLOROPHENOL,2,4,5-

PB85-106474/XAB
Locating and Estimating Air Emissions from Sources of Chromium
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Jul 84, 237p, EPA-450/4-84-007G, PC A11/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with chromium. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of chromium and in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit chromium, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for chromium release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
7440-47-3	CHROMIUM

PB85-110567
Petroleum Dry Cleaners - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 84, 26p, EPA-450/3-82-012B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section III of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented. Generally, each alternative contains a different control technology. The economic, environmental and energy impact of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7215	COIN-OPERATED LAUNDRIES AND CLEANING
7216	DRY CLEANING PLANTS, EXCEPT RUG

PB85-110948/XAB
Handbook of Summaries of the National Cancer Institute/National Toxicology Program Carcinogenesis Bioassay Technical Reports. Update Number 1
National Cancer Institute
Sep 84, 91p, PC A05/MF A01

Abstract: The Handbook of Summaries of the National Cancer Institute/National Toxicology Program Carcinogenesis Bioassay Technical Reports is a compilation of the results of the carcinogenicity testing program of the National Cancer Institute and the National Toxicology Program, and contains information such as chemical structure, uses, doses, route of administration, species of test animals, target sites and types of tumors.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE

PB85-11375/REB
Heavy-Duty Vehicle Emission Conversion Factors 1962-1997
EPA, Ann Arbor, MI, OMS
M.C. Smith IV
Aug 84, 51p, EPA-AA/SCSB-84-1, PC A04/MF A01

Abstract: This report describes the methodology and the specific conversion factors used for the heavy-duty gasoline and diesel powered vehicles for the model years 1962 through 1997. Heavy-duty emission factors are used by MOBILE3, a computer program that determines emission inventories in various localities.

CT	CONTROL TECHNOLOGY DOCUMENT
DM	DISPERSION MODELING
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
42	TRUCKING AND WAREHOUSING

PB85-114114/REB
Toxics '95: Outlook of Factors and Trends for Toxic Chemicals
EPA, Washington, DC, OPTS
J.F. Coates, Inc.
V.T. Coates, et al.
May 84, 233p, EPA-560/4-84-002, PC A11/MF A01

Abstract: The objective of this project is to assist the Office of Toxic Substances in identifying the factors and trends that will shape the next decade of toxic substances control and thereby support OTS' long-term policy and budget planning. The core of this document, Chapter 2, is three heuristic scenarios of the chemical industry in 1995. One scenario envisions the results of 'rapid evolution,' another the results of 'multidimensional change,' and the third a state of relative 'stability.' The authors have grounded these scenarios in their ideas generated from wide ranging reading and discussions during two Toxics '95 workshops.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
28	CHEMICALS AND ALLIED PRODUCTS

PB85-115145/XAB
Hot Flue Gas Spiking and Recovery Study for Tetrachlorodibenzodioxins (TCDD) Using Modified Method 5 and SASS (Source Assessment Sampling System) Sampling with a Simulated Incinerator
EPA, Research Triangle Park, NC, IERL
Battelle Columbus Labs
M, Cooke, F. DeRoos, B. Rising
Oct 84, 29p, EPA-600/2-84-159, PC A03/MF A01

Abstract: The report gives results of an evaluation of the sampling and analysis of ultratrace levels of dibenzodioxins using EPA's recommended source sampling procedures (Modified Method 5 (MM5) train and the Source Assessment Sampling System--SASS). A gas-fired combustion system was used to simulate incineration flue gas, and a precision liquid injection system was designed for the program. The precision liquid injector was used to administer dilute solutions of 1,2,3,4-tetrachlorodibenzo-p-dioxin (1,2,3,4-TCDD) directly into a hot--260C (500F)--flue gas stream. Injections occurred continuously during the sampling episode so that very low gas-phase concentrations of 1,2,3,4-TCDD were continuously mixed with the flue gases. Recoveries were measured for eight burn experiments. For all but one, the recoveries could be considered quantitative, demonstrating efficient collection by the EPA sampling systems. In one study, the components and connecting lines from a sampling device were analyzed separately to show where the 1,2,3,4-TCDD deposited in the train.

CL-DIOXIN	DIOXINS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-115160/REB
Validation of an Emission Measurement Method for Inorganic Arsenic from Stationary Sources: Proposed Method 108. Laboratory and Field Test Evaluation
EPA, Research Triangle Park, NC, EMSL
Research Triangle Institute
T.E. Ward, et al.
Oct 84, 94p, EPA-600/4-84-080, PC A05/MF A01

Abstract: The United States Environmental Protection Agency (USEPA) has listed inorganic arsenic emissions as a hazardous air pollutant. USEPA proposed Method 108 for the measurement of these emissions from stationary sources has been subjected to validation studies in this work. Laboratory and field studies were performed. Laboratory studies included analysis of laboratory samples, preparation and analysis of liquid and filter audit samples, and sample stability determinations. Field studies included determination of the precision of the method in the measurement of inorganic arsenic emissions from stationary sources at the two industries currently subject to the USEPA proposed inorganic arsenic emissions regulations. Considering the sampling sites and the variability of process operations, these results indicate a highly acceptable degree of precision. Literature reviews to reveal the sources of emissions are reported. Recommendations are made for improving the method.

EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING
7440-38-2 ARSENIC AND COMPOUNDS AS AS

PB85-115905
Health Assessment Document for Chromium
EPA, Research Triangle Park, NC, ECAO
Jun 84, 354p, EPA-600/8-83-014F, PC A16/MF A01

Abstract: This document summarizes current, scientific information regarding the effects of chromium on man and on the environment. Specifically, this document discusses the following topics: physical and chemical properties of chromium; environmental distribution and cycling; and the metabolism, toxicology, and essentiality of chromium. In addition, this document identifies the factors most germane to assessing quantitative, human health risks.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7440-47-3 CHROMIUM

PB85-117034/REB
Mobility of Toxic Compounds from Hazardous Wastes
EPA, Las Vegas, NV, EMSL
Oak Ridge National Lab
C.W. Francis, M.P. Maskarinec, J.C. Goyert
Jul 84, 279p, EPA-600/4-84-069, PC A13/MF A01

Abstract: The objective of this research was to develop a laboratory extraction method for solid wastes that simulates concentrations of inorganic and organic constituents in leachates that result from co-disposing industrial wastes with municipal wastes in landfills (co-disposal in a landfill containing 95:5 ratio of municipal to industrial waste, respectively). The intent was to produce a scientific rationale and a data base from which an extraction method can be selected to simulate leaching of solid wastes co-disposed with municipal wastes.

CL-HAZWAST HAZARDOUS WASTES
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB85-119121/XAB
Current Intelligence Bulletin 35. Ethylene Oxide (EtO): Evidence of Carcinogenicity
National Institute of Occupation Safety and Health
May 81, 26p, PC A03/MF A01, NIOSH 81-130, Avail. NIOSH

Abstract: The National Institute of Occupational Safety and Health (NIOSH) recommends that ethylene oxide be regarded in the workplace as a potential occupational carcinogen, and that appropriate controls be used to reduce worker exposure. These recommendations are based primarily on an industry-sponsored study demonstrating that ethylene oxide is carcinogenic in experimental animals. In this study, ethylene oxide was associated with increases in leukemia in female rats and peritoneal mesotheliomas (malignant tumors) in male rats. There has been widespread recognition of the mutagenic potential of ethylene oxide, and recent evidence demonstrates adverse reproductive effects in mammals, which also are of public health concern. In addition, limited epidemiologic investigations at two worksites provide evidence that excess risk of cancer mortality may exist for the ethylene oxide workers studied. Some workers are on occasion exposed to relatively high concentrations of ethylene oxide, particularly where it is used for fumigation and sterilization. On the basis of this information, NIOSH requests that producers, distributors, and users of ethylene oxide, and of substances and materials containing ethylene oxide, give this information to their workers and customers, and that prof./trade assoc. and unions inform members.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-21-8 ETHYLENE OXIDE

PB85-119139/XAB
Current Intelligence Bulletin 32. Arsine (Arsenic Hydride) Poisoning in the Workplace
National Institute of Occupational Safety and Health
Aug 79, 15p, NIOSH 79-142, PC A02/MF A01, Avail. NIOSH

Abstract: The National Institute of Occupational Safety and Health (NIOSH) recommends that appropriate workpractices be implemented to reduce the risk of worker exposure to arsine (AsH3) gas. There is a HIGH POTENTIAL FOR THE GENERATION OF ARSINE GAS WHEN INOGANIC arsenic is exposed to nascent (freshly formed) hydrogen. This recommendation is based on several reports of worker exposure to arsine resulting in severe toxic effects or death. Most of the reported cases occurred when arsine was accidently generated during an industrial process. NIOSH would like to inform the occupational health community of some of the circumstances in which workers have been poisoned by arsine, with particular emphasis on the underlying mechanisms of generating the gas. We request that producers and distributors of arsenic and materials containing arsenic transmit informatiom to their customers and employees, and that professional associations and unions inform their members. Stibine (SbH3), another toxic gas, if formed when antimony is exposed to nascent hydrogen. In most situtations where arsine can be formed, stibine can also be formed if antimony is present. Therefore, similar workpractices should be implemented to reduce the risk of worker exposure to stibine.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7784-42-1 ARSINE

PB85-120848/XAB
Biological Effects of Radiofrequency Radiation
EPA, Research Triangle Park, NC, HERL
D.F. Cahill, J.A. Elder
Sep 84, 271p, EPA-600/8-83-026F, PC A12/MF A01

Abstract: The document presents a critical review of the available literature on the biological effects of radiofrequency (RF) radiation. The objective was to summarize and evaluate the existing database for use in developing RF-radiation exposure guidance for the general public. The frequency range of concern in this document is 0.5 MHz to 100 GHz, which includes nearly all the significant sources of population exposure to RF radiation, except 60-Hz electrical power systems. Research reports that are judged to be credible according to a set of objective criteria are examined for the relation between the RF energy absorbed and the presence or absence of biological effects. The reported consequences of the interaction between RF radiation and biological systems are examined from two perspectives: whole-body-averaged specific absorption rate (SAR) and RF-energy-induced core-temperature increases.

CL-RAD RADIATION
EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT

PB85-121119/REB
Capital and O and M (Operation/Maintenance) Cost Relationships for Hazardous Waste Incineration
EPA, Cincinnati, OH, IERL
Acurex Corp.
R.J. McCormick, R.J. DeRosier
Oct 84, 217p, EPA-600/2-84-175. PC A10/MF A01

Abstract: The objective of this study was to develop relationships between capital and operation/maintenance (O&M) costs for hazardous waste incineration and the various waste-specific, design-specific, and operational factors that affect these costs. These cost relationships have been designed so that total capital investment, annual O&M cost, and unit (dollars per lb. etc.) disposal cost estimates can be calculated for a variety of waste compositions, different incineration system designs and configurations, and a wide range of system operating conditions and performance requirements. The input data specifications include physical/chemical waste characteristics and throughput rates, generic incinerator design type, capacity, and operating temperature, particulate and acid gas removal requirements, energy recovery utilization, and operating schedule.

CL-HAZWAST HAZARDOUS WASTES
CT CONTROL TECHNOLOGY DOCUMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB85-121143/REB
Atmospheric Transport of Toxaphene to Lake Michigan
EPA, Duluth, MN, ERL
University of Michigan, Ann Arbor
C.P. Rice, P.J. Samson, G. Noguchi
Nov 84, 68p, EPA-600/3-84-101, PC A04/MF A01

Abstract: Atmospheric levels of toxaphene were monitored during the summer and fall of 1981 at 4 locations: Greenville, Mississippi, St. Louis, Missouri, Bridgman, Michigan, and Beaver Island, Michigan. Each collection was conducted by continuously sampling air during the first two weeks of the months of August, September, October, and November. The collected toxaphene was analyzed on a capillary equipped electron capture gas chromatograph. The average concentrations over the entire sampling period for each site were 7.39 ng/cu m in Greenville, 1.18 ng/cu m in St. Louis, and 0.27 ng/cu m for Lake Michigan (Bridgman and Beaver Island combined). The summer versus fall fluctuations in amount of toxaphene at each site was 0.44 ng/cu m versus 0.26 ng/cu m for Bridgman; 1.73 ng/cu m versus 0.63 ng/cu m for St. Louis; and 9.05 ng/cu m versus 4.34 ng/cu m for Greenville. The maximum monthly average occurred in September for all of these collections. Diagnostic modeling to describe possible air transport of toxaphene showed that at all receptor locations the air transport corridor for toxaphene was associated with southerly winds.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
8001-35-2	TOXAPHENE

PB85-121184/REB
Systems Reliability and Performance: Pilot-Scale Incineration of Chlorinated Benzenes at the Combustion Research Facility
EPA, Cincinnati, OH, IERL
Versar, Inc.
F.C. Whitmore, et al.
Oct 84, 240p, EPA-600/2-84-174, PC A11/MF A01

Abstract: A series of 34 test burns was conducted between August 1983 and January 1984 in the pilot-scale rotary kiln incineration system at the USEPA Combustion Research Facility (CRF), using chlorinated benzenes as surrogate Principal Organic Hazardous Components (POHCs), over a range of feed compositions, POHC feed rates, rotary kiln temeratures, and afterburner temperatures. The CRF rotary kiln system consistently produced Destruction and Removal Efficiency (DRE) values above 99.99% for the chlorinated benzene POHCs. DRE values below 99.99% were obtained during several types of failure mode simulations (flame-out in kiln or afterburner). A large number of Products of Incomplete Combustion (PICs) were produced and identified, a number of which are toxic or possibly carcinogenic. Deliberate reduction of excess air levels resulted in significant production of soot and PICs but did not produce higher levels of CO in the combustion gases. Hot-zone sampling just downstream of each of the two combustion chambers provided for the detailed study of PIC formation and will facilitate the future development of models of the incineration process. Helium injection techniques were used to determine combustion gas flow rates and to measure residence time distributions (which directly affect destruction efficiencies).

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)
630-08-0	CARBON MONOXIDE
95	ENVIRONMENTAL QUALITY AND HOUSING
951	ENVIRONMENTAL QUALITY
9511	AIR, WATER & SOLID WASTE MANAGEMENT

PB85-122422/REB
Environmental Effects of Utilizing Solid Waste as a Supplementary Power Plant Fuel
EPA, Cincinnati, OH, IERL
Battelle Columbus Labs
D.A. Vaughan, et al.
Nov 84, 64p, EPA-600/2-84-178, PC A04/MF A01

Abstract: The results of 3 years of research on the utilization of shredded and magnetically separated municipal refuse to supplement high-sulfur coal as fuel in a stoker-fired boiler are presented. During the first half of the research, a refuse handling and furnace feed system consisting of argiculture crop handling equipment was used. With this equipment the feasibility of blowing shredded refuse into a boiler and burning it completely on a traveling grate was demonstrated. Corrosion probe exposures were used to show the effectiveness of cofiring to reduce short-term corrosion of boiler tube metals. Reduced emissions of SO2 from the high-sulfur coal also resulted from dilution of the coal with refuse and by action of alkaline components of refuse.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
7446-09-5	SULFUR DIOXIDE

PB85-122455/REB
Effects of Pollutants on Human Viral Respiratory Disease
EPA, Research Triangle Park, NC, HERL
North Carolina University at Chapel Hill
W.A. Clyde, et al.
Nov 84, 30p, EPA-600/1-84-015, PC A03/MF A01

Abstract: Many epidemiologic studies have shown excessive respiratory disease morbidity in areas of high atmospheric pollution. This study was designed to develop and characterize an animal model and investigate the possible interactive effects of infection and particulate air pollutants using small laboratory animals. Models of human parainfluenza virus type 3 disease were established by aerosol inoculation of hamsters and cotton rats. The temporal course of the following were examined: lung virus titers; pulmonary histopathology; alveolar macrophage function; changes in pulmonary mechanics; serum antibody development and upper respiratory tract histopathology. Animals were exposed acutely (2 hours) to ammonium nitrate or lead oxide respirable aerosols before or following viral inoculation. Exposures ranging from 59-66 mg/cu m but not 0.76 mg/cu m of the nitrate resulted in a one-day extension of viral replication and concommitant retardation of peribronchial lymphocytic infiltration. Lead oxide exposures at levels greater than 2,350 micrograms/cu m increased lung virus titers and serum antibody titers. The models developed in these studies may be useful for work on chronic exposure to the same or other pollutants and on the pathogenesis of virus/pollutant interactions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1332-37-2	IRON OXIDE
6484-52-2	AMMONIUM NITRATE

PB85-123925/XAB
Mercury Health Effects Update: Health Issue Assessment
EPA, Research Triangle Park, NC, ECAO
T. Clarkson, et al.
Aug 84, 152p, EPA-600/8-84-019F, PC A08/MF A01

Abstract: This report reviews and evaluates the scientific information on the potential health effects from mercury exposure, with emphasis on those effects associated with human chronic inhalation exposures. The findings are based on a review of the scientific literature since the promulgation of the 1973 National Emission Standard for Mercury. This report consists of six chapters that provide a cohesive discussion of all aspects of mercury exposure and focus upon those data thought to be most useful and relevant for human health risk assessment purposes.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7439-97-6	MERCURY

PB85-124154/REB
Characterization of Heavy-Duty Motor Vehicle Emissions Under Transient Driving Conditions
EPA, Research Triangle Park, NC, ESRL
Southwest Research Institute
M.A. Warner-Selph, H.E. Dietzmann
Nov 84, 166p, EPA-600/3-84-104, PC A08/MF A01

Abstract: The objective of this program was to characterize heavy-duty diesel truck and bus emissions produced during transient driving cycles. In the initial phase of the program an improved road-load simulation method was developed for use in operating large trucks on a chassis dynamometer. This method was used in testing vehicles on the chassis dynamometer. The second phase of testing involved operation of six vehicles on the chassis dynamometer removal of the engine and testing of the engines. Chassis emissions were then compared to engine emissions. Additionally, chassis tests were conducted over a range of dynamometer inertia settings for two of the six vehicles for the purpose of comparison with engine emissions. Baseline emissions were also measured on six buses, five single-axle tractors, and 17 dual-axle tractors over the chassis version of the transient cycle. Regulated emissions and several unregulated emissions were measured on baseline tests. Unregulated emissions included particulate, aldehydes and ketones, phenols, DOAS odor, various elements, nitropyrenes, and Ames mutagenic response.

CL-DIESEL	DIESEL FUEL EMISSIONS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
417	BUS TERMINAL AND SERVICE FACILITIES
42	TRUCKING AND WAREHOUSING
421	TRUCKING, LOCAL AND LONG DISTANCE

PB85-124196/XAB
Health Assessment Document for Carbon Tetrachloride
EPA, Cincinnati, OH, ECAO
C.T. DeRosa, et al.
Sep 84, 321p, EPA-600/8-82-001F, PC A14/MF A01

Abstract: Carbon tetrachloride (CC14) is a haloalkane with a wide range of industrial and chemical applications. Its presence in the atmosphere and in water appears to be of anthropogenic origin. It is readily absorbed through the lung, gastrointestinal tract and skin and, therefore, poses a hazard to human health. This document is an assessment of the literature available up to March 1983, with the exception of the effect of CC14 on stratospheric ozone, to reflect the most recent development in this area. The scientific literature was inventoried, key studies were evaluated and summaries and conclusions were prepared to qualitatively identify the chemical's toxicity and related characteristics. Observed effect levels and dose-response relationships are discussed evaluating the potential toxicity of CC14.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
56-23-5	CARBON TETRACHLORIDE

PB85-124204/REB
Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels in Steel Plants - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Aug 84, 43P, EPA-450/3-82-020B, PC A03/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designation of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
332	IRON AND STEEL FOUNDRIES
3321	GRAY IRON FOUNDRIES
3322	MALLEABLE IRON FOUNDRIES
3324	STEEL INVESTMENT FOUNDRIES
3325	STEEL FOUNDRIES, NEC

PB85-124915/XAB
Health Assessment Document for Hexachlorocyclopentadiene
EPA, Cincinnati, OH, ECAO
D.J. Reisman
Nov 84, 177p, EPA-600/8-84-001F, PC A09/MF A01

Abstract: The Office of Health and Environmental Assessment of the Office of Research and Development has prepared this health assessment document (HAD) at the request of the Office of Air Quality Planning and Standards. Hexachlorocyclopentadiene (HEX) is an intermediate in the pesticide and flame retardant manufacturing processes and is currently being studied by the Environmental Protection Agency (EPA) to determine if it should be regulated as a hazardous air pollutant under the Clean Air Act. The scientific literature and key studies have been reviewed and evaluated and summaries and conclusions have been directed at the health effects from exposure to HEX. This peer-reviewed document contains information on HEX covering toxicity, environmental fate and transport, aquatic effects, mutagenicity, epidemiology, teratogenicity and other health effects data. The data base is neither extensive nor adequate for assessing the carcinogenicity of long-term health effects of acute or low-level chronic exposure to HEX.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
22	TEXTILE MILL PRODUCTS
226	TEXTILE FINISHING, EXCEPT WOOL
229	MISCELLANEOUS TEXTILE GOODS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
77-47-4	HEXACHLOROCYCLOPENTADIENE

PB85-125516/XAB
Asbestiform Fibers: Nonoccupational Health Risks
National Academy of Sciences
Feb 84, 354p, PC A16/MF A01
ISBN 0-309-03446-9, $22.50

Abstract: The committee considered the health risks posed by nonoccupational airborne exposures to asbestos and other natural or synthetic asbestiform fibers. The issue is important because many people may be exposed to these materials, although at relatively low levels. The EPA asked the NAS to undertake a study with two goals: to evaluate the human health risks associated with nonoccupational exposure to asbestiform fibers, with emphasis on inhalation of outdoor and indoor air; and to determine the extent to which the physical-chemical properties of the fibers may be associated with the development of various human diseases and the extent to which such information may be incorporated into assessing health risks resulting from exposure to the fibers. The committee found that much more information is available about asbestos than about the other materials of concern. Nonoccupational exposure to asbestiform fibers in air present a risk to human health. The extent of the risk is highly uncertain, depending on the nature and amount of exposure and other factors. The committee made several recommendations, i.e., systematic monitoring and characterization of asbestiform fibers with standardized methods should be undertaken on nonoccupational environments; cessation of cigarette smoking should be encouraged.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
1332-21-4	ASBESTOS

PB85-126126/REB
Characterization of Emissions from Advanced Automotive Power Plant Concepts
EPA, Research Triangle Park, NC, ESRL
Southwest Research Institute
D.A. Montalvo, C.T. Hare
Nov 84, 485p, EPA-600/3-84-108, PC A21/MF A01

Abstract: Emissions from three diesel cars, (a prototype naturally-aspirated Fiat 131, a prototype turbocharged Fiat 131, and a 1981 Oldsmobile Cutlass Supreme), using two fuel formulations were assessed. Each Fiat was tested with and without a prototype catalytic trap. Vehicle operating procedures used for test purposes included the 1981 Federal Test Procedures as well as the Highway Fuel Economy Test, the New York City Cycle, and an 85 km/hr steady-state cruise. Organic solubles in particulate were analyzed for various constituents and characteristics including fractionation by relative polarity, benzo(a)pyrene (BaP), and mutagenic activity by Ames bioassay. Application of the catalytic trap oxidizer system to the Fiat prototypes resulted in significant reductions of organic and carbon monoxide emissions under all transient driving conditions examined. Total particulate emissions were reduced an average of 55 percent with the turbocharged engine and 65 percent with the naturally-aspirated engine. The Ames assay mutagenic response (revertants/microgram) of the particulate phase organics was elevated by the catalytic exhaust aftertreatment device; however the emission rates (revertants/km) were reduced an average of 66 percent with the turbocharged and 73 percent with the naturally-aspirated engines.

CL-ALDEHYD	ALDEHYDES
CL-AMINE	AMINES
CL-DIESEL	DIESEL FUEL EMISSIONS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-SULFIDE	SULFIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
50-32-8	BENZO(A)PYRENE
630-08-0	CARBON MONOXIDE

PB85-129500/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators. Volume 1: Executive Summary
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, G. Jungclaus
Nov 84, 43p, EPA-600/2-84-181A, PC A03/MF A01

Abstract: This report, Volume 1, Executive Summary, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-129518/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators.
Volume 2: Incinerator Performance Results.
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, G. Jungclaus
Nov 84, 149p, EPA-600/2-84-181B, PC A07/MF A01

Abstract: This report, Volume II, Incinerator Performance Results, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-129526/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators.
Volume 3: Appendices A and B
EPA, Cincinnati, OH, IERL
Midwest Reasearch Institute
A. Trenholm, P. Gorman, G. Jungclaus
Nov 84, 175p, EPA-600/2-84-181C, PC A08/MF A01

Abstract: This report, Volume III, Appendices A and B, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST	HAZARDOUS WASTES
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7647-01-0	HYDROGEN CHLORIDE

PB85-129534/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators. Volume 4: Appendices C through J.
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, C. Jungclaus
Nov 84, 360p, EPA-600/2-84-181D, PC A16/MF A01

Abstract: This report, Volume IV, Appendices C through J, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST HAZARDOUS WASTES
CL-PM PARTICULATE MATTER
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS
7647-01-0 HYDROGEN CHLORIDE

PB85-129542/REB
Performance Evaluation of Full-Scale Hazardous Waste Incinerators. Volume 5: Appendices K and L
EPA, Cincinnati, OH, IERL
Midwest Research Institute
A. Trenholm, P. Gorman, C. Jungclaus
Nov 84, 189p, EPA-600/2-84-181E, PC A09/MF A01

Abstract: This report, Volume V, Appendices K and L, of a series of extensive performance data EPA obtained through eight (8) field tests of actual industrial/commercial incinerators, was prepared in response to the Agency's need to conduct a regulatory impact analysis (RIA) for hazardous waste incinerators to determine the need, adequacy, and economic feasibility of current RCRA incinerator regulations. Tests involved trial burn-type testing at each plant during typical albeit closely monitored daily operations on wastes typical of their routine disposal function. Most incinerators were found to be closely approaching or performing within RCRA requirements for destruction of compounds, although some facilities showed substandard results in other areas.

CL-HAZWAST HAZARDOUS WASTES
CL-PM PARTICULATE MATTER
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS
7647-01-0 HYDROGEN CHLORIDE

PB85-132363/XAB
Health Assessment Document for Epichlorohydrin
EPA, Research Triangle Park, NC, ECAO
Dynamac Corp.
Dec 84, 246p, EPA-600/8-83-032F, PC A11/MF A01

Abstract: This document summarizes current scientific information regarding the health and environmental effects of epichlorohydrin. Specifically, this document discusses the following topics: metabolism and toxicology; and factors most relevant to assessing quantitative health risks, particularly risk of cancer. Epichlorohydrin is moderately toxic by oral, dermal, and inhalation routes of exposure. Long-term animal studies provide evidence that epichlorohydrin should be considered a potential human carcinogen (IARC category 2B). Epichlorohydrin causes gene and chromosomal mutations in vitro and in vivo, and has been shown to be clastogenic in human lymphocytes. Epichlorohydrin was not teratogenic in mice, rats, or rabbits, but was embryotoxic at doses which were toxic to the pregnant mouse. Transient infertility was observed in male rats exposed to epichlorohydrin. Epichlorohydrin is not expected to persist in air, water, or soil because of hydrolysis. The atmospheric residence time was calculated to be 5.8 days.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
106-89-8	EPICHLOROHYDRIN

PB85-132744/REB
Radionuclides: Regulatory Impact Analysis of Emission Standards for Elemental Phosphorus Plants
EPA, Washington, DC
Faucett (Jack) Associates, Inc.
Oct 84, 84p, EPA-520/1-84-025, PC A05/MF A01

Abstract: The standard proposed for elemental Phosphorus plants, the subject of the analysis, was 1 curie per year of polonium-210 for each source. There are currently six plants producing elemental phosphorus. EPA sampling of emissions of four plants and estimates of emissions at the remaining two indicate that, with current output levels and operating characteristics, only two plants will be affected by a 1 curie per year standard. Three alternatives to the 1 curie per year standard were considered in performing the regulatory impact analysis: 2.5 Ci/year, 10 Ci/year and no control. For each of these control options and for each plant, the analysis considered the technologies that are available to reduce emissions to the required level, examined the costs of these technologies, identified the least-cost options evaluated the cost per fatal cancer eliminated, and assessed the economic impacts of the regulation.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
13981-52-7	POLONIUM-210
14	NONMETALLIC MINERALS, EXCEPT FUELS
147	CHEMICAL AND FERTILIZER MINERALS
1475	PHOSPHATE ROCK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-134500/XAB
Radionuclides: Response to Comments for Final Rules. Volume 1
EPA, Washington, DC
Oct 84, 145p, EPA-521/84-023-1, PC A07/MF A01

Abstract: On April 6, 1983, EPA published in the Federal Register (48 FR 15076) proposed standards for certain categories of radionuclides. This report summarized major concerns and issues arising from written and oral comments on the April 6 proposed, as well as EPA's response to these.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-134518/XAB
Radionuclides: Response to Comments for Final Rules. Volume 2
EPA, Washington, DC
Oct 84, 46p, EPA-520/1-84-023-2, PC A03/MF A01

Abstract: In December 1983, the Administrator of the EPA formed a Science Advisory Board Subcommittee to review the methodology used by the Office of Radiation Programs in assessing health risks from airborne release of radionuclides. In addition, new technical data was gathered which included the results of radionuclide emission testing at calciners at three elemental phosphorus plants. New information also became available on the cost and effectiveness of methods for reducing radon emissions from underground uranium mines. Because the Agency intended to consider this new information in the ongoing rulemaking, public comment was requested on the new information, (49 FR 33695, August 25, 1984). This document summarized public comment on the new information and EPA's response to them. In addition, Section 2 of the document contains EPA's response to the Science Advisory Board Subcommittee's comments.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

P885-135812/REB
Chemical Substances Information Network (CSIN): An Overview
Interagency Toxic Substances Data Committee
Washington, DC, 29p, PC A03/MF A01

Abstract: The Chemical Substances Information Network (CSIN) is a sophisticated switching network based on heterogeneous distributed data base management and networking concepts which were only theory less than a decade ago. CSIN offers efficient and effective access to on-line information resources (systems) containing data and information relevant to chemical substances, as well as information covering other scientific disciplines and subject matters. The purposes on CSIN are two-fold; first to meet the growing chemical data and information requirements of industry, academe, government (Federal and State), public interest groups, and others, and secondly to reduce the burden on the private and public sector communities when responding to complex Federal legislation oriented to chemical substances. CSIN is not another data base, but is a gateway system. CSIN links many independent and autonomous data and bibliographic computer systems oriented to chemical substances, establishing a 'library of systems.' Users may converse with any or all systems interfaced by CSIN without prior knowledge of or training on these independent systems, regardless of the hardward, software data, formats, or protocols of these information resources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

P885-136653/REB
Asbestos in Buildings: A National Survey of Asbestos-Containing Friable Materials
EPA, Washington, DC, OTS
Battelle Columbus Labs
J. Strenio, et al.
Oct 84, 236p, EPA-560/5-84-006, PC A11/MF A01

Abstract: A nationally representative sample of 231 buildings at 10 sites were inspected for potentially asbestos-containing materials. Bulk samples (1,510) were taken and analyzed by Polarized Light Microscopy. Estimates were made of the number and percent of buildings with asbestos-containing friable materials, the square footage of such materials, and the percent asbestos content of the materials.
In buildings constructed prior to 1960, ACFM was concentrated primarily in pipe and boiler insulation; in buildings constructed between 1960 and the early 1970's, ACFM was concentrated primarily in sprayed-on or trowelled-on materials. In 1973, EPA banned the use of asbestos thermal and acoustical insulation materials except for decorative purposes, and in 1978 EPA banned them for all purposes.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT
1332-21-4	ASBESTOS
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB85-137107/REB
Hazardous/Toxic Air Pollutant Control Technology: A Literature Review
EPA, Research Triangle Park, NC, IERL
Radian Corp.
G.S. Shareef, A.J. Miles, B.K. Post
Dec 84, 275p, EPA-600/2-84-194, PC A12/MF A01

Abstract: The report summarized literature on hazardous/toxic air pollutant (HAP) sources and control techniques employed in their reduction and/or destruction. The information was abstracted from an extensive computerized and manual literature search and data base development study. The primary emphasis of the report is on HAP control technology. However, a brief summary of major source categories that emit HAPs is also included. About 70 hazardous/toxic compounds or groups of compounds are covered in this study; most are volatile organic compounds. In the HAP control technology data base, most of the information is for the Synthetic Organic Chemical Manufacturing Industry (SOCMI) source category. However, data are also available for the combustion, solvent use, and metal processing industries. The major add-on control techniques for volatile organic HAPs discusssed in this report are combustion, absorption, adsorption, and condensation. Combustion techniques include thermal and catalytic incineration, flaring, and disposal of waste streams in boilers and process heaters. The add-on control devices identified in the literature for control of particulate HAP emissions are electrostatic precipitators, baghouses, wet scrubbers, and cyclones. A list of references, and their abstracts, are included.

CL-HAZWAST	HAZARDOUS WASTES
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-138279/REB
Hazardous Air Pollutants: Dry-Deposition Phenomena
EPA, Research Triangle Park, NC, ESRL
Battelle Pacific Northwest Labs
G.A. Sehmel, R.N. Lee, T.W. Horst
Dec 84, 80p, EPA-600/3-84-114, PC A05/MF A01

Abstract: Dry-deposition rates were evaluated for two hazardous organic air pollutants, nitrobenzene and perchloroethylene, to determine their potential for removal from the atmosphere to three building material sufraces, cement, tar paper, and vinyl asbestos tile. Dry-deposition experiments were conducted in two stirred chambers. Building material was placed on the bottom of the stirred chambers, and removal rates were evaluated by introducing the organic air pollutant along with nondepositing sulfur hexafluoride (SF6) tracer gas into a stirred chamber. Changes in airborne concentrations with time were then monitored. Because the HAP removal rates were small, sulfur hexafluoride tracer gas was used to evaluate the rates of leakage from the SC in order to correct the deposition rates. When HAP wall losses were assumed negligible, HAP concentration decreases (corrected using the SF6 leakage rate) ranged from near 0 to 3%/h. Dry-deposition velocities were calculated from the rate-of-change over time of the airborne concentrations. The calculated deposition velocities were consistently small, approximately .0001 cm/sec or less. These deposition velocities reflect mostly substrate resistance, but the fan speed could not be increased sufficiently to ensure in the limit that only substrate resistance was measured.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
127-18-4	TETRACHLOROETHYLENE
98-95-3	NITROBENZENE

PB85-138535/REB
Thermal Degradation Products from Dielectric Fluids
EPA, Washington, DC, OTS
Midwest Research Institute
M.D. Erickson, et al.
Nov 84, 100p, EPA-560/5-84-009, PC A05/MF A01

Abstract: Electrical transformer fires can cause extensive smoke damage, especially when polychlorinated biphenyls (PCBs) are involved since they can form polychlorinated dibenzofurans (PCDFs) and other toxic by-products. To characterize the potential for by-product formation, this study was undertaken to optimize conditions for PCDF formation from PCBs and to study the potential for formation of PCDFs and polychlorinated dibenzodioxins (PCDDs) from combustion of selected dieletric fluids, including those contaminated with PCBs. A bench-scale thermal destruction system was used to combust the samples. The dielectric fluid was fed continuously using a syringe pump. The XAD-2 trap and a rinse of connective tubing were Soxhlet extracted. Extracts were cleaned using column chromatorgraphy to isolate the PCDFs and PCDDs. All samples were analyzed for PCDFs using HRGC/EIMS in the selected ion monitoring mode. The results of this work indicate that the optimum conditions for PCDF formation from PCBs are near 675C for 0.8 s or longer, with 8% excess oxygen. Under these conditions, percent levels of PCDFs are formed from mineral oil or silicone oil contaminated with PCBs at 5ppm or greater.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB85-138576/REB
Technical Overview of the Concept of Disposing of Hazardous Wastes in Industrial Boilers
EPA, Cincinnati, OH, IERL
Acurex Corp.
C. Castaldini, et al.
Dec 84, 198p, EPA-600/2-84-197, PC A09/MF A01

Abstract: The use of industrial boilers for the destruction of hazardous wastes is increasing at a rapid rate. This is partly due to the fact that the practice changes a 'negative value' waste material into a 'positive value' fuel and partly to the fact that current RCRA regulations specifically exempt facilities that burn wastes in energy producing operations from complying with RCRA incineration mandates. This study evaluated the concept with the purpose of answering the following questions: What is the present and projected magnitude of hazardous waste combustion in boilers? Which waste materials and boiler types are the most compatible, and what quantities of these are available? What are the potential mechanical difficulties or environmental hazards associated with this practice?

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-138618/REB
Trace Metal Retention When Firing Hazardous Waste in a Fluidized-Bed Incinerator
EPA, Research Triangle Park, NC, AAERL
Battelle Columbus Labs
R.D. Lift, T.L. Tewksbury
Dec 84, 46p, EPA-600/2-84-198, PC A06/MF A01

Abstract: The report describes a bench-scale fluidized-bed incinerator that will capture trace metals on the bed material when firing hazardous waste. The design is based on limited tests at an existing laboratory facility. Operating conditions, operating procedures, and equipment design are established for greater than 90 percent trace metal capture on the bed material. A surrogate hazardous waste, paint containing lead chromate, was used in the tests. Other trace metals were identified that can be captured by agglomeration on a silica bed material. The design provides the capability of operating in either a single or double stage configuration so that various bed materials or operating conditions can be used to capture different trace metals or to provide more effective capture. The bench-scale fluidized-bed incinerator will have the flexibility to operate with several fuels, bed materials, and fluxing agents, over a wide range of operating conditions.

CL-HAZWAST	HAZARDOUS WASTES
CL-METAL	METALLIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-138626/REB
Hazardous Air Pollutants: Wet Removal Rates and Mechanisms
EPA, Research Triangle Park, NC, ASRL
Battelle Pacific Northwest Labs
M.T. Dana, R.N. Lee, J.M. Hales
Dec 84, 106p, EPA-600/3-84-113, PC A06/MF A01

Abstract: Fourteen hazardous organic air pollutants were evaluated for their potentials to be wet deposited by precipitation scavenging. This effort included a survey of solubilities (Henry's Law constants) in the literature, measurement of solubilities of three selected species, development and documentation of a general deposition model (MPADD) which includes dry deposition and plume depletion, and performance of scavenging field experiments to provide a data base for testing the model. Solubility parameters (dimensionless ratio of aqueous concentration to air concentration) for ethylene oxide, nitrobenzene, and methyl chloroform were measured in rainwater at two temperatures each. Four field experiments were conducted: three using nitrobenzene and one involving methyl chloroform. Agreement of measured concentrations with model-calculated values was good for nitrobenzene, despite larger than desired experimental uncertainties during two of the releases. Analytical difficulties resulted in only a few measurements of methyl chloroform rainwater concentrations. These results and sample test runs of the Multi-Pollutant Atmospheric Deposition and Depletion (MPADD) model, show that wet deposition should have little effect on plumes of non-reactive hazardous gases within kilometers of their sources.

AM	AMBIENT MONITORING
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
71-55-6	TRICHLOROETHANE,1,1,1-
75-21-8	ETHYLENE OXIDE
98-95-3	NITROBENZENE

PB85-142016/REB
Review and Evaluation of the Evidence for Cancer Associated with Air Pollution
EPA, Research Triangle Park, NC, OAQPS
Clement Associates, Inc.
I.C.T. Nisbet, et al.
Nov 84, 295p, EPA-450/5-83-006R, PC A13/MF A01

Abstract: This final report is a comprehensive summary and compilation of the scientific evidence related to the hypothesis that cancer rates in human populations are associated with their exposure to pollutants present in the ambient air. Critical comments on the strength and weaknesses of the studies are presented and general methodological problems in the conduct and interpretation of the studies are discussed. No overall judgments about the weight of the entire body of scientific evidence are presented.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1332-21-4	ASBESTOS
28	CHEMICALS AND ALLIED PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
7440-38-2	ARSENIC AND COMPOUNDS AS AS
75-01-4	VINYL CHLORIDE

PB85-143261/REB
Technical Assistance Document for Monitoring Sulfuric Acid Vapor from Stationary Sources
EPA, Research Triangle Park, NC, EMSL
Engineering-Science, Inc.
W.T. Winberry
Jan 85, 150p, EPA-600/4-85-005, PC A07/MF A01

Abstract: When fuels containing sulfur are burned, almost quantitative formation of sulfur dioxide (SO2) occurs. As much as 5-8% of the sulfur dioxide emitted may be converted to sulfur trioxide either by atomic oxygen in the combustion zone or by efficient catalysis of heavy metal contaminants in the fuel oil. At moisture levels above four percent and temperature below 300F (149C), theoretical models indicate that the sulfur trioxide quickly combines with the water vapor present to form sulfuric acid vapor. The composition and concentration of the chemical species emitted are influenced by fuel characteristics, boiler design and operation, and emission controls. It is precisely this combination of emissions of different species of sulfates that has hindered the characterization and measurement of sulfuric acid vapor from combustion sources. This document describes the different types of monitoring principles with their advantages and limitations. Evaluation of different monitoring techniques--both laboratory and field evaluation--are included in the document. Also included is a section dealing with generating known concentration of sulfuric acid vapor used in evaluating monitoring techniques.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
7446-09-5	SULFUR DIOXIDE
7664-93-9	SULFURIC ACID

PB85-144046/REB
Evaluation of Cryogenic Trapping As a Means for Collecting Organic Compounds in Ambient Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
M. Holdren, et al.
Jan 85, 57p, EPA-600/4-85-002, PC A04/MF A01

Abstract: The methodology used in reduced temperature preconcentration of volatile organic compounds has been tested using a prototype automated gas chromatographic system. Mixtures of sixteen volatile organic compounds in humidified zero air were passed through a Nafion tube dryer and the organic compounds were collected on a reduced-temperature trap. The dryer reduced the water concentration without significantly affecting the integrity of the trace organic species. The selective reduction of water vapor improves the chromatography of the trace organics and likewise permits processing larger sample volumes. Statistical analysis of the data indicated that the canisters would serve as acceptable storage vessels for most of the volatile organic compounds tested.

AM AMBIENT MONITORING
CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY

PB85-144053/XAB
Proceedings: National Symposium on Recent Advances in Pollutant Monitoring of Ambient Air and Stationary Sources, Held at Radisson Plaza Raleigh Hotel, on May 8-10, 1984
EPA, Research Triangle Park, NC, EMSL
Nov 84, 213p, EPA-600/9-84-019, PC A10/MF A01

Abstract: The fourth annual national symposium sponsored by EPA's Environmental Monitoring Systems Laboratory was held May 8-10, 1984 in Raleigh, North Carolina. In seven sessions over three days, papers and discussions focused on state-of-the-art systems for monitoring source emissions, ambient air, acid deposition, hazardous emissions and personal monitoring. This symposium is part of a continuing effort to explore recent advances in pollutant monitoring of ambient air and stationary sources. It serves as a forum for exchange of ideas and scientific information. In response to the Agency regulatory needs, this symposium focused on acid deposition, personal exposure and toxic substances. This publication is intended to assist those researchers interested in furthering the science of air monitoring. The papers in this proceedings are abbreviated versions of those presented by the speakers. Several papers are omitted because the speakers did not submit them in time for the agency's peer review.

AM AMBIENT MONITORING
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING

PB85-150332/XAB
Health Assessment Document for Chlorinated Benzenes
EPA, Cincinnati, OH, ECAO
W.B. Peirano
Jan 85, 606p, EPA-600/8-84-015F, PC A99/MF A01

Abstract: The chlorinated benzenes are a group of 12 compounds (monochlorobenzene) 1,2-, 1,3-, 1,4-dichlorobenzene; 1,2,3-, 1,2,4-, 1,3,5-trichlorobenzene; hexachlorobenzene). Environmental contamination results from emissions to air and water during the manufacture and use of the chlorinated benzenes and from the disposal of wastes from a number of processes. These compounds tend to accumulate in lipid-containing tissues of animals and humans. The ubiquitous environmnetal distribution of the chlorinated benzenes and their bioconcentration in humans are a basis for concern over the consequences of chronic exposure to human health. The first portion of the health assessment document is devoted to the chlorinated benzenes in the environment: physical and chemical properties, the monitoring of the chlorinated benzenes in various media, natural and human-made sources, the transport and distribution of the chlorinated benzenes within environmental media, and the levels of exposure. The second part is devoted to biological responses in laboratory animals and humans including metabolism, pharmacokinetics, as well as the toxicological effects of the chlorinated benzenes. This document forms the scientific basis for a proposed decision by EPA concerning the regulation of chlorinated benzenes under the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
108-90-7	MONOCHLOROBENZENE
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS

PB85-150860/REB
Studies of the Tumor Initiating, Tumor Promoting, and Tumor Co-Initiating Properties of Respiratory Carcinogens
EPA, Research Triangle Park, NC, HERL
S. Nesnow, L.L. Triplett, T.J. Slaga
Dec 84, 26p, EPA-600/D-84-290, PC A03/MF A01

Abstract: Coke oven emissions, roofing tar emissions, and cigarette smoke represent three diverse human respiratory carcinogens for which good epidemiological information is available. Although the carcinogenic effects of these emissions in experimental animals have been established, the tumor promoting and cocarcinogenic effects have been less well studied, especially those of coke oven and roofing tar emissions. The tumor promoting effects of a coke oven sample and a roofing tar emission sample were investigated by using SENCAR mouse skin as the experimental test system. The coke oven sample was approximately 12 times as active as the roofing tar sample as a tumor promoter in mouse skin initiated with benzo(a)pyrene (B(a)P). Cocarcinogenesis was studied in SENCAR mice by using the tumor co-initiation protocol. Mice initiated with B(a)P and pyrene and subsequently promoted weekly with and 12-O-tetradecanoyl-phorbol-13-acetate (TPA) produced more papillomas than mice initiated with B(a)P and promoted with TPA. A roofing tar sample and cigarette smoke condensate each produced synergistic effects with B(a)P on TPA-promoted SENCAR mouse skin, and an organic extract of diesel particulate emissions and B(a)P had attenuative effects.

CL-CARCIN	CARCINOGENS
CL-COE	COKE OVEN EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB85-153534/XAB
Size Distributions of Elemental Carbon in Atmospheric Aerosols
EPA, Research Triangle Park, NC, ASRL
California Univ., Los Angeles
A.H. Miguel, S.K. Friedlander
Jan 85, 9p, EPA-600/D-85-003, PC A02/MF A01

Abstract: Environmental problems caused by atmospheric aerosols are well documented in the specialized literature. Studies reporting on the role of dense clouds of soil particles in past mass extinctions of life on Earth and, more recently (Turco et al., 1983), on calculations of potential global effects of dust and aerosol clouds (generated in a nuclear war) have received the attention of the public through oral and written reports by the news media. Because of the importance of particulate elemental carbon (PEC) to climatic impact, a study was conducted on the size distribution of PEC in samples collected: (i) in an urban area, (ii) inside the air duct of an urban tunnel, and (iii) next to the take-off runway of a busy airport. Besides providing needed data to improve the precision of calculations of potential local and global environmental effects, the PEC size distributions reported in this study help the reader understand the mechanism of association of PEC and polycyclic aromatic hydrocarbons (PAHs), a class or organic compounds that includes several mutagens.

AM	AMBIENT MONITORING
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
7440-44-0	CARBON

PB85-153542/XAB
Receptor Modeling for Carbonaceous Aerosols: Source Characterization
EPA, Research Triangle Park, NC, ASRL
California Univ., Los Angeles
S.V.Hering, et al.
Jan 85, 8p, EPA-600/D-85-004, PC A02/MF A01

Abstract: Two types of sources, freeway vehicles and a commercial airport, were sampled with the objective of determining source profiles suitable for receptor modeling of carbonaceous aerosols. A threefold approach is used: (1) measurement of polycyclic aromatic hydrocarbons (PAH) concentrations; (2) bulk characterization of the carbon component by thermal analysis; and (3) determination of elemental composition by X-ray fluorescence. Additionally, the relative stability of the polycyclic aromatic hydrocarbons upon exposure to filtered urban air was evaluated. Data were collected at a receptor site, which by virtue of its location is expected to be impacted by these two source types.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
45	TRANSPORTATION BY AIR
458	AIR TRANSPORTATION SERVICES
4582	AIRPORTS AND FLYING FIELDS
4583	AIRPORT TERMINAL SERVICES

PB85-153559/REB
Capital and O and M Cost Relationships for Hazardous Waste Incineration: Addendum No. 1 - Ionizing Wet Scrubber Costs
EPA, Cincinnati, OH, HWERL
Acurex Corp.
R. McCormick, H. Lips
Jan 85, 21p, EPA-600/2-85-004, PC A02/MF A01

Abstract: This report addresses certain cost aspects of hazardous waste incineration; specifically capital and operating costs for ionizing wet scrubbers (IWS). It is an addendum to a more comprehensive report 'Capital and O&M Cost Relationships for Hazardous Waste Incineration,' which developed parametric methods for estimating capital and annual costs for incinerators as a function of waste characteristics and quantities, facility capacity, type and location. The earlier study assumed that particulate/HCl emissions were controlled using a venturi scrubber/packed bed absorber system. This study includes an IWS system as a design alternative.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-153906/REB
Review of National Emission Standards for Mercury
EPA, Research Triangle Park, NC, OAQPS
Dec 84, 72p, EPA-450/3-84-014, PC A04/MF A01

Abstract: This report presents the findings of the 5-year review of the national emission standards for mercury. Industries subject to the existing standard are mercury-cell chlor-alkali plants, sludge drying and incineration plants, and mercury ore processing facilities. Information and estimates are presented concerning processes, mercury emissions, control technology, compliance status, and industry growth. Information is presented about other industry source categories which have mercury air emissions, but are not regulated by the standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

PB85-155927/XAB
Survey of Ethylene Dichloride Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Dec 84, 153p, EPA-450/3-84-018, PC A08/MF A01

Abstract: The potential health impact of nationwide ethylene dichloride emissions is being investigated. This document contains information on the sources of ethylene dichloride emissions, current emissions levels, control methods that could be used to reduce ethylene dichloride emissions, and cost estimates for employing controls.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2833	MEDICINALS AND BOTANICALS
2834	PHARMACEUTICAL PREPARATIONS
80	HEALTH SERVICES
806	HOSPITALS

PB85-156180/REB
Evaluation of At-Sea Disposal of FGC (Flue Gas Cleaning) Wastes.
Volume 1: Biological Testing and Studies with Untreated Wastes
EPA, Research Triangle Park, NC, AEERL
Arthur D. Little, Inc.
C.B. Cooper, et al
Dec 84, 166p, EPA-600/7-85-001A, PC A08/MF A01

Abstract: This two-part report is the third of a series on a continuing EPA research program on the feasibility of disposing of flue gas cleaning (FGC) wastes in the ocean. Part 1 gives results of laboratory-scale chemical and biological experiments with untreated (unstabilized) FGC wastes designed to provide basic data on environmental impact potential. Part 2 gives results of further chemical and biological tests with a forced-oxidation (sulfate-rich) FGC waste and with stabilized FGC wastes. Results of tests performed to date and related assessment efforts indicate that the conventional (concentrated-dump) at-sea disposal of unstabilized FGC wastes with soil-like properties on the Continental Shelf appears to be environmentally undesirable, unless contradicted by further work. Test results also indicate that at-sea dispersed disposal of sulfate-rich (and, possibly, sulfite-rich) soil-like FGC wastes is sufficiently promising to merit further research. Likewise, results of this and other programs indicate that conventional or concentrated disposal of brick-like stabilized FGC wastes is also promising.

CL-SULFATE SULFATES
CL-SULFITE SULFITES
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB85-156198/REB
Evaluation of At-Sea Disposal of FGC (Flue Gas Cleaning) Wastes.
Volume 2: Biological Testing and Studies with Stabilized Wastes
EPA, Research Triangle Park, NC, AEERL
Arthur D. Little, Inc.
C.B. Cooper, I. Bodek, and C.J. Santhanam
Dec 84, 90p, EPA-600/7-85-001B, PC A05/MF A01

Abstract: This two-part report is the third of a series on a continuing EPA research program on the feasibility of disposing of flue gas cleaning (FGC) wastes in the ocean. Part 1 gives results of laboratory-scale chemical and biological experiments with untreated (unstabilized) FGC wastes designed to provide basic data on environmental impact potential. Part 2 gives results of further chemical and biological tests with a forced-oxidation (sulfate-rich) FGC waste and with stabilized FGC wastes. Results of tests performed to date and related assessment efforts indicate that the conventional (concentrated-dump) at-sea disposal of unstabilized FGC wastes with soil-like properties on the Continental Shelf appears to be environmentally undesirable, unless contradicted by further work. Test results also indicate that at-sea dispersed disposal of sulfate-rich (and, possibly, sulfite-rich) soil-like FGC wastes is sufficiently promising to merit further research. Likewise, results of this and other programs indicate that conventional or concentrated disposal of brick-like stabilized FGC wastes is also promising.

CL-METAL METALLIC COMPOUNDS
CL-SULFATE SULFATES
CL-SULFITE SULFITES
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB85-157444/REB
Issues in Monitoring Population Exposures
EPA, Research Triangle Park, NC, HERL
Texas Univ., Galveston, TX
J.B. Ward
Jan 85, 45p, EPA-600/D-85-008, PC A03/MF A01

Abstract: This manuscript explores the risks associated with expo-sur to carcinogenic chemicals that have become a growing source of public concern. Steadily increasing numbers of agents are being identified as mutagens and carcinogens. Furthermore, we are in-creasingly aware of sources of exposure to such agents both in the occupational setting and general environment. There is a growing need for reliable and sensitive methods for detecting human exposure to carcinogenic hazards at the time of their occurrence. By detect-ing hazards early, significant reduction in the risk of adverse health outcome can be achieved by reduction or termination of expo-sure. The monitoring of human populations for genetic damage has the potential to improve our ability to detect health hazards and prevent or reduce the risk of workplace-exposure-related cancer. In the long run this can reduce costs related to illness. It is possible that the costs of exposure control can also be reduced by better estab-lishing the sources of significant exposure and by understanding the human response to exposure. However, its greatest promise is in the protection of human health through the early detection and prevention of disease processes resulting from mutagenic exposure.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB85-161263/REB
Measurements of Polycyclic Aromatic Compounds in the Cylinder of an Operating Diesel Engine
EPA, Research Triangle Park, NC, ASRL
Minnesota, Univ., Minneapolis, MN
D.B. Kittelson, C.J. Du, and R.B. Zweidinger
Jan 85, 16p, EPA-600/D-85-012, PC A02/MF A01

Abstract: A unique system which allows sampling of the entire contents of one of the cylinders of a 5.7-liter V-8 indirect-injection diesel engine has been developed. An explosively actuated cutter ruptures a diaphragm in the combustion chamber and allows the contents of the cylinder to rush out and be subsequently diluted and quenched with cool nitrogen. Particles are collected with a high-volume impactor/filter system. This system has been used to collect a series of particle samples at crankangles ranging from 5 to 40 degrees after top dead center. Particle samples from the exhaust were also obtained. The samples have been extracted to determine the soluble organic fraction. These extracts have been analyzed for five polycyclic aromatic compounds: pyrene, fluoranthene, benz(a)pyrene, benz(k)fluoranthene, and 1-nitropyrene. The results indicate significant removal of the first four between the combustion chamber and exhaust manifold. The 1-nitropyrene behaves differently, however, with higher concentrations in the exhaust samples than in the cylinder samples. This suggests that 1-nitropyrene is formed during the expansion stroke and/or in the exhaust manifold.

CL-DIESEL	DIESEL FUEL EMISSIONS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
129-00-0	PYRENE
206-44-0	FLUORANTHENE
207-08-9	BENZO (K) FLUORANTHENE
50-32-8	BENZO(A)PYRENE
5522-43-0	NITROPYRENE, 1-

PB85-164002/REB
Vinyl Chloride: Relief Valve Standards
EPA, Research Triangle Park, NC, OAQPS
Jan 85, 88p, EPA-450/3-85-002, PC A05/MF A01

Abstract: This document presents information on relief valve discharge performance by industries subject to the vinyl chloride (VC) NESHAP regulations. Information on relief valve discharge performance was collected as part of the review of the technological basis and administrative aspects of the current VC standard. The report includes relief valve discharge performance data for the entire compliance period following promulgation of the VC standard (i.e., 1978-1983). The information presented was based on Regional compliance reports, industry survey and plant visit.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
75-01-4	VINYL CHLORIDE

PB85-165751/REB
Radionuclides: Background Information Document for Final Rules. Volume 1
EPA, Washington, D.C., ORP
PEI Assoc., Inc., Battelle Columbus Labs, and Kilkelly Environmental Assoc., Inc.
Oct 84, 282p, EPA-520/1-84-022-1, PC A13/MF A01

Abstract: On October 31, 1984, EPA published a notice in the Federal Register withdrawing proposed standards for radionuclide emissions from four sources: (1) DOE facilities, (2) NRC-licensed facilities and non-DOE Federal facilities, (3) underground uranium mines, and (4) elemental phosphorus plants. This Background Information Document supports the Agency's final actions on radionuclides. Volume I is an integrated risk assessment. It addresses historical and current regulatory programs and strategies, hazard identifications (health effects), radionuclide emissions, reduction of dose and risk, movement of radionuclides through environmental pathways, radiation dosimetry, and estimating the risk of health effects resulting from radionuclide air emissions. Volume II examines the source categories and presents the following information for each category: a general description of the source category, a brief description of the processes that led to the emissions of radionuclides into air, a summary of emissions data, and estimates of the radiation doses and health risks to both individuals and populations.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-165769/REB
Radionuclides: Background Information Document for Final Rules. Volume 2
EPA, Washington, D.C., ORP
PEI Assoc., Inc., Battelle Columbus Labs, and Kilkelly Environmental Assoc., Inc.
Oct 84, 441p, EPA-520/1-84-002-2, PC A19/MF A01

Abstract: This report serves as a background information document in support of the Environmental Protection Agency's final rules for sources of emissions of radionuclides pursuant to Section 112 of the Clean Air Act. This report presents an analysis of the public health impact caused by radionuclides emitted into the air from facilities that are the subject of this rulemaking. These facilities are examined as six major source categories: (1) Department of Energy (DOE) facilities, (2) Nuclear Regulatory Commission licensed facilities and non-DOE Federal facilities, (3) coal-fired utility and industrial boilers, (4) uranium mines, (5) phosphate industry facilities, and (6) mineral extraction industry facilities. For each source category, the authors present the following information: (1) a general description of the source category, (2) a brief description of the processes that lead to the emissions of radionuclides into air, (3) a summary of emissions data, and (4) estimates of the radiation doses and health risks to both individuals and populations.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
493	COMBINATION UTILITY SERVICES
4939	COMBINATION UTILITY SERVICES, NEC
7440-61-1	URANIUM
7723-14-0	PHOSPHOROUS (YELLOW)

PB85-167906/REB
Methodology for Ranking the Degree of Hazard Associated with Exposure to Carcinogens and Other Toxic Chemicals
EPA, Washington, D.C., OHEA
E.L. Anderson, et al.
Feb 85, 57p, EPA-600/D-85-040, PC A04/MF A01

Abstract: A hazard index is an overall indicator of the potential harm of a hazardous substance to humans and the environment. This paper describes the use of a carcinogenicity index and a systemic (chronic) toxicity index in setting reportable quantities under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. The three types of evidence used to evaluate a substance's carcinogenic hazard are: (1) epidemiological, (2) experimental, and (3) supportive evidence from short-term tests, metabolism and pharmacokinetics and structure-activity correlations. Hazardous substances suspected of carcinogenic potential are ranked by the level of this evidence and the potency factor. The potency factor is /ED(sub 10), where ED(sub 10) is the estimated dose associated with a lifetime cancer risk of 10%. The toxicity index for substances with systemic (chronic) toxicity potential is based on the minimum effective dose levels for chronic exposures via environmental media and the type of effect. About 200 potential carcinogens and 200 chemicals associated with other diseases have been evaluated and assigned a hazard ranking.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

PB85-168433/XAB
Health Assessment Document for Beryllium. Review Draft
EPA, Research Triangle Park, NC, ECAO
R. Elias, et al.
Dec 84, 179p, EPA-600/8-84-026A, PC A09/MF A01

Abstract: The properties of beryllium resemble those of aluminum, zinc, and magnesium. The main routes of beryllium intake are inhalation and ingestion. The chemical properties of beryllium are such that transformation of soluble to insoluble forms of inhaled beryllium results in long retention time in the lungs. Absorbed beryllium is deposited mainly in the skeleton, where the biological half-time is fairly long. The lung is the critical organ of both acute and chronic noncarcinogenic effects. However, the lung effects caused by chronic exposure may be combined with systemic effects. Certain beryllium compounds have been shown to be carcinogenic in various experimental animals under differing routes of exposure. Epidemiologic studies present equivocal conclusions on the carcinogenicity of beryllium and beryllium compounds. A lifetime cancer risk for continuous inhalation exposure at 1 micrograms beryllium/cu m has been estimated.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
13966-02-4 BERYLLIUM-7
7440-41-7 BERYLLIUM

PB85-168771/REB
Characterization of Hazardous Waste Sites, a Methods Manual. Volume 2: Available Sampling Methods (Second Edition)
EPA, Las Vegas, NV, EMSL
Lockheed Engineering and Management Services, Co., Inc.
P.J. Ford, P.J. Turina, and D.E. Seely
Dec 84, 303p, EPA-600/4-84-076, PC A14/MF A01

Abstract: Investigations at hazardous waste sites and sites of chemical spills often require on-site measurements and sampling activities to assess the type and extent of contamination. This document is a compilation of sampling methods and materials suitable to address most needs that arise during routine waste site and hazardous spill investigations. The sampling methods presented in this document are compiled by media, and were selected on the basis of practicality, economics, representativeness, compatability with analytical considerations, and safety, as well as other criteria. In addition to sampling procedures, sample handling and shipping, chain-of-custody procedures, instrument certification, equipment fabrication, and equipment decontamination procedures are described. Sampling methods for soil, sludges, sediments, and bulk materials cover the solids medium. Ten methods are detailed for surface waters, groundwater and containerized liquids; twelve are presented for ambient air, soil gases and vapors, and headspace gases. A brief discussion of ionizing radiation survey instruments is also provided.

CL-HAZWAST HAZARDOUS WASTES
EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB85-169878/REB
Modified Method 5 Train and Source Assessment Sampling System: Operator's Manual
EPA, Research Triangle Park, NC, AEERL
Arthur D. Little, Inc.
L.M. Schlickenrieder, J.W. Adams, and K.E. Thrun
Feb 85, 138p, EPA-600/8-85-003, PC A07/M A01

Abstract: The report is a detailed guide for using two devices to sample stack gas effluents from hazardous waste incinerators. These two devices--the Modified Method 5 (MM5) train and the Source Assessment Sampling System (SASS) train--have been identified as the sampling devices to be used in assessing the Destruction and Removal Efficiency (DRE) of Principal Organic Hazardous Compounds (POHCs) by hazardous waste incinerators. Step-by-step procedures for cleaning, assembling, calibrating, using, and recovering samples from each device are detailed. Guidelines for the reduction and presentation of data are included.

EPA ENVIRONMENTAL PROTECTION AGENCY
SS SOURCE SAMPLING

PB85-170157/REB
Risk Assessment and Management: Framework for Decision Making
EPA, Washington, D.C., OA
Dec 84, 38p, EPA-600/9-85-002, PC A03/MF A01

Abstract: The risk assessment and risk management initiatives described in this report are tools which will help make possible more efficient protection of the environment and human health. There are thousands of chemicals in commerce and an unknown number of contaminants and unintended by-products. Screening by estimates of potential risk reduction is an attractive basis for comparing regulatory priorities. Risk management provides a context for balanced analysis and decision-making. Toxic chemicals are legitimately frightening, but the trouble is that we are exposed to a complex, highly dilute mixture of chemicals, taken in through air, water, and food. The Agency can contribute to rational discussion by exposing the scientific basis for the risk, including the confidence they have in the estimate; placing the risk reduction expected from the regulation in context with other risks and other opportunities for risk reduction; and explaining the values on which the balancing judgements have been made. Some important differences (defined by statute) in the ways the laws manage risk will always remain, but a risk management approach can use their remaining administrative flexibility to make more efficient use of the Agency's and society's resources to reduce risk and make the Agency's actions more consistent.

EPA ENVIRONMENTAL PROTECTION AGENCY
RA RISK ASSESSMENT
RDG REG DEVELOPMNT GUIDE

PB85-172567/REB
Sampling of Automobile Interiors for Organic Emissions
EPA, Research Triangle, ASRL
D. Dropkin
Feb 85, 29p, EPA-600/3-85-008, PC A03/MF A01

Abstract: A study was undertaken to determine the concentrations of N-nitrosamines (specifically N-nitrosodimethylamine and N-nitrosomorpholine), hydrogen cyanide, and other volatile organic compounds emitted from the interiors of new cars. The three cars tested were placed in an enclosed shed and heated with infrared tungsten lamps to simulate the temperature rise (heat build-up) in the interior of the cars as if the cars were sitting outdoors on a hot sunny day. These air samples were pulled through cartridges containing adsorbents such as Thermosorb (specifically to collect for N-nitrosamines) and Tenax (used to collect volatile organic compounds), as well as pulling the air through impingers and also into Tedlar bags to analyze for hydrogen cyanide. Low concentrations of N-nitrosodimethlamine and N-nitrosomorpholine were measured in the car interiors during the heating process, but higher concentrations of these same N-nitrosames were measured outside of the cars. No hydrogen cyanide was detected inside of or outside the two cars tested for this compound.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-NITROSO	NITROSO COMPOUNDS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT
SS	SOURCE SAMPLING
124-40-3	DIMETHYLAMINE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
59-89-2	N-NITROSOMORPHOLINE
62-75-9	N-NITROSODIMETHYLAMINE
74-90-8	HYDROGEN CYANIDE
7647-01-0	HYDROGEN CHLORIDE

PB85-172575/REB
Preliminary Assessment of Costs and Credits for Hazardous Waste Co-Firing in Industrial Boilers
EPA, Cincinnati, OH, HWERL
Acurex Corp.
R. McCormick, and L. Weitzman
Feb 85, 64p, EPA-600/2-85-013, PC A04/MF A01

Abstract: This report provides preliminary information on the costs and credits associated with hazardous waste co-firing in industrial boilers. The main objective is to identify and evaluate the costs/credits inherent in current hazardous waste co-firing practices, plus the additional costs that may be incurred as a result of more stringent emissions limitations. An overview of current hazardous waste/ industrial boiler co-firing practices is provided. This overview addressed the types of waste now being burned in boilers, the generic designs and capacities of boilers now being co-fired, and the types of air pollution control device (APCD) retrofits that may be required in the advent of air emissions regulations. Parametric cost estimate methods are provided for: (1) waste handling, equipment addition, (2) combustion system retrofit, (3) APCD retrofit, (4) incremental O&M costs, and (5) fuel savings and waste disposal credits. The cost estimating approach accounts for differences in waste characteristics, boiler design, capacity, and waste/fuel co-firing ratio. Finally, cost/credit calculations are presented for two hypothetical waste co-firing scenarios. These calculations illustrate how the information provided in this report can be used; no conclusions concerning the economy of waste co-firing are intended.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-172583/XAB
Receptor Models for Airborne Organic Species
EPA, Research Triangle Park, NC, ASRL
New York Univ. Medical Center
J.M. Daisey, P.J. Lioy, and T.J. Kneip
Feb 85, 205p, EPA-600/3-85-014, PC A10/MF A01

Abstract: A study was performed that: (1) critically reviewed existing source emissions data to determine if variations in the organic composition of such emissions could be used to distinguish sources of airborne particulate matter and particulate organic matter, (2) attempted to develop receptor source apportionment models for three fractions of particulate organic matter and selected polycyclic aromatic hydrocar-bons using an existing set of ambient aerosol measurements made at a site in New York City, and (3) defined critical needs for the development of receptor models for airborne organic matter. The results of this study showed that it is possible to develop receptor source appor-tionment models for particulate organic species using the factor analysis/multiple regression modeling technique. It showed that a lack of adequate organic composition data for source emissions was a critical limitation for model validation and also for development of chemical mass balance receptor source apportionment models. It also showed, however, that existing source emissions data on polycyclic aromatic hydrocarbons and certain other species indicate that such species might be useful in distinguishing emissions from certain types of sources.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-173243/REB
Measurement of Volatile Organic Compound Capture Efficiency
EPA, Cincinnati, OH, HWERL
Radian Corp.
D.B. Hunt and J.L. Randall
Feb 85, 119p, EPA-600/2-85-011, PC A06/MF A01

Abstract: This report reviews the feasibility considerations regarding each of several potential alternate approaches for determining capture efficiency and experimental testing of one approach, the liquid/gas-phase material balance. Two phases of experimental testing were conducted: laboratory and field investigations. The measured mean cature efficiencies for the field test were higher than expected (106.7% with a coefficient of variation 7.4%). At this time, there is no material balance methodology which is superior to the gas-phase approach using a total enclosure around the regulated coating operation.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB85-173771/REB
Textile Dyes and Dyeing Equipment: Classification, Properties and Environmental Aspects
EPA, Research Traingle Park, NC, AEERL
Radian Corp.
S.V. Kulkarni, et al.
Feb 85, 402p, EPA-600/2-85-010, PC A18/MF A01

Abstract: The report gives results of a study of available information on textile dyeing equipment, dyeing procedures, and dye chemis-try, to serve as background data for estimating the properties and evaluating the associated risks of new commercial dyestuffs. It reports proper-ties of dyestuffs which affect their use on a fabric or in a dye machine, placing special emphasis on acid, substantive direct, azoic, disperse, sulfur, and fiber reactive dyes. These six classes were selected, based on projections of new dye development activities and concerns about the health and environmental effects of these dyes. Dyeing equipment and associated dyeing procedures that received detailed coverage were beck, semi-continuous (pad-batch), transfer printing, and direct textile printing. These four types of equipment were chosen because of their projected, continued, and predominant use in the textile dyeing industry. The report estimates the quan-tity of dyestuff released to the environment from each type o dyeing equipment, and classifies the production capacity of textile dyeing operations and their wastewater volumes. The litera-ture searc conducted for this study revealed little or no informa-tion on worker activities, worker exposure to dyes, and specific chemical and physical properties of individual textile dyestuffs.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
22	TEXTILE MILL PRODUCTS
23	APPAREL AND OTHER TEXTILE PRODUCTS
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES

PB85-176790/REB
Identification and Quantification of Nitropolynuclear Aromatic Hydrocarbons in Ambient and Indoor Air Particulate Samples
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, et al.
Mar 85, 21p, EPA-600/D-85-050, PC A02/MF A01

Abstract: A study was conducted to estimate the influence of PAH and NO2-PAH concentration in residences as a reslut of the following parameters: (1) smoking; (2) wood burning fireplaces; (3) home utilities; (4) ambient air intrusion. Eight study homes and two background homes located in Columbus, OH were sampled in March 1984. Test parameters included the presence or absence of smokers, wood burning fire places, and gas or electric utilities. Samples were taken for 24 hours by using a modified EPA/SURC medium volume sampler. A quartz fiber filter was used to collect particulate matter and a polyurethane foam cartridge was used to trap vapors. This presentation emphasizes the analytical methods and the results of the NO2-PAH determinations from both ambient and indoor air samples. The identification and quantification of NO2-PAH were accomplished using an on-column injection, negative chemical ionization gas chromatography/mass spectrometry (NCIGC/MS) technique, in the multiple ion detection mode (MID). A statistical analysis of these data was conducted to evaluate the test parameter effects on NO2-PAH levels.

CL-CARCIN	CARCINOGENS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SA	SOURCE ASSESSMENT

PB85-176790/XAB
Identification and Quantification of Nitropolynuclear Aromatic Hydrocarbons in Ambient and Indoor Air Particulate Samples
EPA, Research Triangle Park, NC
Battelle Columbus Labs
C.C. Chuang, et al.
Mar 85, 21p, EPA-600/D-85-050, PC A02/MF A01

Abstract: Polynuclear aromatic hydrocarbons (PAH) and nitro-substituted poly-nuclear aromatic hydrocarbons (N2-PAH) have bee identified in organic extracts of ambient air particulate matter. Since many of the identified PAH and NO2-PAH are potent carcinogens and/or mutagens, determination of their presence in ambient air is of considerable importance. A study was conducted to estimate the influence of PAH and NO2-PAH concentration in residues as a result of: (1) smoking, (2) wood burning fireplaces, (3) home utilities, and (4) ambient air intrusion. Eight study homes and two background homes located in Columbus, OH were sampled in March 1984. Samples were taken for 24 hours by using a modified EPA/SURC medium volume sam-pler This presentation will emphasize the analytical methods and the results of the NO2-PAH determinations from both ambient and indoor air samples. The identi-fication and quantification of NO2-PAH were accomplished using an on-column injection, negative chemical ionization gas chromatography/ mass spectrometry (NCI GC/MS) technique, in the multiple ion detec-tion mode (MID). A statistical analysis of these data was conducted to evaluate the test paramater effects on NO2-PAH levels.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-177210/REB
Residential Wood Combustion Study: 1980-1982 Executive Summary
EPA, Seattle, WA, Region X
Green (Del) Associates, Inc.
B.A. Burton and A.J. Senzel
Aug 84, 32p, EPA-910/9-82-089K, PC A03/MF A01

Abstract: Between 1900 and 1970, this country saw a massive shift in home heating from coal and wood to the newer cleaner sources of heat such as oil and electricity. With the large price increases and supply uncertainties of the 1979s for the newer energy sources, however, many homeowners began to look again at the use of wood for home heating. Because of public health, esthetic and economic growth consideration, residential wood combustion has become a focus of air pollution control interest in the last few years. This study was commissioned by the U.S. Environmental Protection Agency, Region 10, to provide some of the necessary information for interested agencies. It was conducted in 1980-81, and was designed to answer these ques-tions for the Pacific Northwest: How serious is the current air pollution problem due to residential wood combustion. Will this problem increase over the next 20 years, and if so, how much. What are the most effective and realistic strategies to reduce the air pollution impact of residential wood combustion.

CL-WOOD	WOOD SMOKE
CT	CONTROL TECHNOLOGY DOCUMENT
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB85-178549/XAB
Current Intelligence Bulletin 43: Monohalomethanes (Methyl Chloride CH3Cl, Methyl Bromide CH3Br, Methyl Iodide CH3I)
National Institute of Occupational Safety and Health
Sep 84, 27p, PC A03/MF A01
NIOSH PUB No. 84-117, AVAIL NIOSH

Abstract: The monohalomethanes (methyl chloride, methyl bromide, and methyl iodide) are alkylating agents and thus have generated concern as to their potential for inducing mutations and cancer. All three compounds were found to be direct-acting mutagens in the Ames assay. In experimental studies in either rats or mice using various routes of administration, these three compounds have also demonstrated the ability to produce cancer. Methyl chloride produced a teratogenic effect (heart defects) in the offspring of pregnant mice exposed by inhalation at 500 to 750 ppm. Based on this data, the National Institute for Occupational Safety and Health (NIOSH) recommends that methyl chloride, methyl bromide, and methyl iodide be considered as potential occupational carcinogens and that methyl chloride be considered a potential occupational teratogen.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
74-83-9	METHYL BROMIDE
74-87-3	METHYL CHLORIDE
74-88-4	IODOMETHANE

PB85-178721/XAB
Current Intelligence Bulletin 42: Cadmium (Cd)
National Institute of Occupational Safety and Health
Sep 84, 16p, PC A01/MF A01
NIOSH PUB No. 84-116, UNAVAIL NIOSH

Abstract: The purpose of this bulletin is to disseminate recent information concerning the potential carcinogenic hazard to workers of cadmium (Cd). In 1976, NIOSH published Criteria for a Recommended Standard...Occupational Exposure to Cadmium, recommending a permissible exposure limit of 40 micrograms of cadmium per cubic meter of air (40 micrograms/cu m) which was viewed as necessary to prevent chronic renal damage in exposed workers. Epidemiological and toxicological data suggesting an association between cadmium exposure and cancer were cited in that document, but the evidence for carcinogenicity was considered to be inconclusive at that time. Based on subsequent epidemiological and toxicological studies, NIOSH now recommends that cadmium and its compounds be regarded as potential occupational carcinogens.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7440-43-9	CADMIUM

PB85-179646
Toxicology and Carcinogenesis Studies of 1,3-Butadiene (CAS No. 106-99-0)
NTP, Research Triangle Park, NC
Aug 84, 108p, NCI/NTP TR 288, PC A06/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
106-99-0	BUTADIENE,1,3-

PB85-181139/REB
Review of New Source Performance Standards for Ammonium Sulfate Manufacture
EPA, Research Triangle Park, NC, OAQPS
Feb 85, 58p, EPA-450/3-85-004, PC A04/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
105-60-2	CAPROLACTAM
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
7783-20-2	AMMONIUM SULFATE

P885-181865/REB
Analysis of Aldehydes and Ketones in the Gas Phase
EPA, Research Triangle Park, NC, ASRL
Union Coll., Schenectady, NY
L.A. Hull
Apr 85, 73p, EPA-600/3-85-021, PC A04, MF A01

Abstract: The development and testing of a 2,4-dinitrophenylhydrazine--acetonitrile (DNPH-ACN) method for the analysis of aldehydes and ketones in ambient air are described. A discussion of interferences, preparation of calibration standards, analytical testing, fluor-escence methods and cartridge sampling are discussed. The results of atmospheric sampling in an urban area and atmospheric and cloudwater sampling in a rural area are included.

AM	AMBIENT MONITORING
CL-ALDEHYD	ALDEHYDES
EPA	ENVIRONMENTAL PROTECTION AGENCY

P885-183085/REB
Exposure Assessment for Asbestos - Contaminated Vermiculite
EPA, Washington, DC, OTS
G.H. Dixon
Feb 85, 110p EPA-560/5-85-013, PC A06/MF A01

Abstract: This document is an exposure assessment for asbestos-contaminated vermiculite. Such exposure is found to occur mainly via inhalation: ingestion and dermal adsorption are insignificant routes of exposure. Vermiculite is released to the air during mining, milling, exfoliation, transport, and use. These operations may also release some asbestos fibers, which are readily transported through the atmosphere.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
1318-00-9	VERMICULITE
1332-21-4	ASBESTOS
14	NONMETALLIC MINERALS, EXCEPT FUELS
149	MISCELLANEOUS NONMETALLIC MINERALS
1499	NONMETALLIC MINERALS, NEC
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3295	MINERALS, GROUND OR TREATED

P885-188837/REB
Assessment of PCDDs (Polychlorinated Dibenzodioxins) and PCDFs (Polychlorinated Dibenzofurans) from PCB (Polychlorinated Biphenyls) Transformer and Capacitor Fires
EPA, Cincinnati, OH, HWERL
Technical Resources, Inc.
A, Lee
Apr 85, 130p, EPA-600/2-85-036, PC A07/MF A01

Abstract: The EPA has been mandated to develop regulations to control exposure to polychlorinated biphenyls (PCBs). In light of this responsibility the EPA Office of Toxic Substances recently issued an Advance Notice of Proposed Rulemaking (ANPR) to define the problem of releases of PCBs and other toxic compounds during fires involving transformers and capacitors containing PCBs. The EPA Office of Research and Development (ORD) has also been mandated under the recently released Dioxin Strategy document to evaluate fire accidents involving PCB transformers and capacitors as potential new sources of polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) in the environment. To develop the information for the two mandated programs, the EPA/ORD undertook this study to assess the problems associated with fires involving aska-rels, to catalog the contamination experiences and to review poten-tial decontamination methods as well as disposal of contaminated material. This study assesses the chemistry of PCBs under thermal conditions, evaluates the generation of PCDDs and PCDFs, reviews technologies for destruction and disposal of PCBs and their toxic contaminants. Methdologies to assess potential hazards and reduce exposure are also discussed.

CL-DIOXIN	DIOXINS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB85-188860/REB
Stability of Parts-per-Billion Hazardous Organic Cylinder Gases and Performance Audit Results of Source Test and Ambient Air Measurement Systems. Status Report 1
EPA, Research Triangle Park, NC, EMSL
Research Triangle Institute
R.K. Jayanty, et al.
Apr 85, 83p, EPA-600/4-85-032, PC A05/MF A01

Abstract: A repository of 14 gaseous organic compounds at parts--per-billion (ppb) levels in compressed gas cylinders has been established by the U.S. Environmental Protection Agency. The primary objectives of this on-going project are: (1) to provide accurate gas mixtures to EPA, state/local agencies, or their contrac-tors for performance audits to assess the relative accuracy of source measurement systems during hazardous waste trial burn tests and ambient air monitoring programs, (2) to verify the manufacturer's certified analysis of the multi-component gas mixtures, (3) to determine the stability of the gas mixtures with time, and (4) to develop new audit materials as requested by EPA. The repository consists of two mixtures of five and nine organic compounds in aluminum cylinders in a balance gas of nitrogen. The five component mixture contains carbon tetrachloride, chloroform, per-chloroethylene, vinyl chloride and benzene. The nine component mixture includes trichloroethylene, 1,2-dichloroethane, 1,2-dibromethane, acetoni-trile, trichlorofluoromethane, dichloro-difluoromethane, bromomethane, methyl ethyl ketone and 1,1,1-tri-chloroethane. Results of 12 of 20 performance audits, and a description of the experimental procedures used for analyses and available stability data, are presented in this report.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB85-188878/REB
Environmental Release of Asbestos from Commercial Product Shaping
EPA; Cincinnati, OH, WERL
Engineering-Science, Inc.
D.A. Falgout
Apr 85, 396p, EPA-600/2-85-044, PC A17/M A01

Abstract: For the first time, the release of respirable asbestos fibers has been quantified in terms of standard mechanical forces using widely accepted methodology and specified QA/QC procedures. Both fabrication of new products from asbestos containing materials and repair or removal of in-use asbestos containing products contribute to the total environmental exposure to asbestos. There is a need to assess these materials and operations according to the potential severity of their fiber releases. This research consisted of performing several simulated industrial/commercial shaping operations on several asbestos containing products. The rates of fiber release, expressed as fibers per cubic centimeter of air inside an enclosed test chamber per gram of asbestos milled, were measured. The filter samples were analyzed by the transmission electron microscope (TEM) method. Lengths, widths, and type of asbestos were reported for fibers and other asbestos structures. In addition, samples were taken for phase contrast microscopic (PCM) analysis during most of the experiments. The results of these analyses are compared. Research on the release of asbestos/substitutes resulting from commercial product manufacture, use, and disposal is of continuing importance.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
1332-21-4	ASBESTOS
26	PAPER AND ALLIED PRODUCTS
266	BUILDING PAPER AND BOARD MILLS
2661	BUILDING PAPER AND BOARD MILLS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS

PB85-188886/REB
Analytical and Sampling Methodology for Characterization of Polynuclear Aromatic Compounds in Indoor Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
N. K. Wilson et al.
1985, 20p EPA-600/D-85-069, PC A02/MF A01

Abstract: Sampling and analysis methodology were developed for the collection and quantification of polynuclear aromatic hydrocarbons, their nitro derivatives, and their nitrogen heterocyclic analogs in indoor air. The methodology was evaluated in a study of air in ten homes. The study included homes with and without woodburning fireplaces, gas heat and appliances, and smoking occupants, and with a range of ventilation rates. The range of concentrations in the homes and facotrs that systematically contribute to those concentrations of selected polynuclear aromatic compounds were estimated. Some practical limitations on the sampling equipment and methodology were identified.

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING

PB85-188886/XAB
Analytical and Sampling Methodology for Characterization of Polynuclear Aromatic Compounds in Indoor Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs, OH
N.K. Wilson, et al.
1985, 20p, EPA-600/D-85-069, PC A02/MF A01

Abstract: Sampling and analysis methodology were developed for the collection and quantification of polynuclear aromatic hydrocarbons, their nitro derivatives, and their nitrogen heterocyclic analogs in indoor air. The methodology was evaluated in a study of air in ten homes. The study included homes with and without woodburning fireplaces, gas heat and appliances, and smoking occupants, and with a range of ventilation rates. The range of concentrations in the homes and factors that systematically contribute to those concentrations of selected polynuclear aromatic compounds were estimated. Some practical limitations on the sampling equipment and methodology were identified.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING

PB85-189066/REB
Evaluation of Hazardous Waste Incineration in an Aggregate Kiln: Florida Solite Corporation
EPA, Cincinnati, OH, HWERL
Monsanto Research Corp.
D.R. Day, L.A. Cox, J.A. Peters
Apr 85, 112p, EPA-600/2-85-030, PC A06/MF A01

Abstract: Aggregate kiln incineration of chlorinated liquid organic waste was investigated in a one-week program at Florida Solite Company. POHCs (toluene, tetrachloroethylene, methyl ethyl ketone, and methyl isobutyl ketone) were monitored in waste and stack emissions. In addition, stack emissions were monitored for particulate matter, particulate trace metals, HCl, SO2 and NOx. Process samples were collected and analyzed for trace metals and chloride. The destruction and removal efficiency of POHCs and the fate of trace metals and chloride ion in the kiln process were determined.

CL-HAZWAST	HAZARDOUS WASTES
CL-METAL	METALLIC COMPOUNDS
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
10102-44-0	NITROGEN DIOXIDE
108-05-4	VINYL ACETATE
108-10-1	METHYLPENTANONE,4-,2-
108-88-3	TOLUENE
127-18-4	TETRACHLOROETHYLENE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7446-09-5	SULFUR DIOXIDE
7647-01-0	HYDROGEN CHLORIDE
78-93-3	BUTANONE,2-

PB85-191138/REB
Sources of Copper Air Emissions
EPA, Research Triangle Park, NC, AEERL
Engineering-Science, Inc.
G.E. Weant
Apr 85, 91p, EPA-600/2-85-046, PC A05/MF A01

Abstract: The report gives results of a study to update estimates of atmospheric emissions of copper and copper compounds in the U.S. Source categories evaluated included: metallic minerals, primary copper smelter, iron and steel making, combustion, municipal incineration, secondary copper smelter, copper compound production, iron foundries, primary lead smelters, primary zinc smelters, ferroalloy production, brass/bronze production, and carbon black production. The study relied on data in published literature, supplemented by EPA test reports and data bases. The approach used to assess each source category involved: (1) estimating total particulate emissions, including fugitives; (2) determining the effect of air pollution control on emissions; (3) estimating the proportion of copper contained in the total particulates; and (4) estimating copper emissions. Copper emissions estimated are presented for each source category.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10	METAL MINING
102	COPPER ORES
1021	COPPER ORES
33	PRIMARY METAL INDUSTRIES
332	IRON AND STEEL FOUNDRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
3332	PRIMARY LEAD
3333	PRIMARY ZINC
335	NONFERROUS ROLLING AND DRAWING
3351	COPPER ROLLING AND DRAWING
336	NONFERROUS FOUNDRIES
3362	BRASS, BRONZE, AND COPPER FOUNDRIES
7440-50-8	COPPER

PB85-191187/REB
Parametric Evaluation of VOC/HAP (Volatile Organic Compounds-Hazardous/Toxic Air Pollutants) Destruction via Catalytic Incineration
EPA, Washington, DC, AEERL
Radian Corp.
M.A. Palazzolo, et al.
Apr 85, 316p, EPA-600/2-85-041, PC A14/MF A01

Abstract: The report describes the use of a pilot-scale catalytic incineration unit/solvent generation system to investigate the effectiveness of catalytic incineration as a way to destroy volatile organic compounds (VOCs) and hazardous/toxic air pollutants (HAPs). Objectives of the study were to: (1) investigate the effects of operating and design variables on the destruction efficiency of VOC/HAP mixtures, and (2) evaluate destruction efficiencies for specific compounds in different chemical classes. Study results verified that the following factors affect catalyst performance: inlet temperature, space velocity, catalyst geometry, compound type, compound inlet concentration, and mixture composition. Tests showed that destruction efficiencies exceeding 98 percent were possible (given sufficiently high inlet temperature/low space velocities) for the following compounds/compound classes: alcohols, acetates, ketones, cellosolves/dioxane, aldehydes, aromatics, and ethylene/ethylene oxide. Destruction efficiencies of at least 97 percent were achieved for acrylonitrile and cresol. Chlorinated hydrocarbons were not effectively destroyed with the type of catalyst used in this study.

CL-ALDEHYD	ALDEHYDES
CL-HAZWAST	HAZARDOUS WASTES
CL-SOLVENT	SOLVENTS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
107-13-1	ACRYLONITRILE
1319-77-3	CRESOL (ALL ISOMERS)
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
74-85-1	ETHYLENE
75-21-8	ETHYLENE OXIDE

PB85-191559/XAB
Health Assessment Document for Dichloromethane (Methylene Chloride)
EPA, Research Triangle Park, NC, ECAO
Bowman Gray School of Medicine, Winston-Salem, NC
S. Bayard, et al.
Feb 85, 250p, EPA-600/8-82-004F, PC A11/MF A01

Abstract: Dichloromethane is used extensively in commercial and industrial solvent applications. The background atmospheric concentration is about 35 ppt. In surface water and drinking water, measured concentrations generally have been in the low parts per billion range. Available data suggest that DCM is biodegradable and has low aquatic toxicity to aquatic organisms. The weight of evidence from the avilable literature indicates that adverse toxicologic (non-genotoxic) effects in humans are unlikely to occur at ambient air or water levels found or expected in the general environment. Available evidence suggests that the teratogenic potential of DCM for humans is minimal. The weight of evidence with respect to mutagenic potential shows that DCM is capable of causing gene mutations and has the potential to cause such effects in exposed human cells. With regard to cancer, the weight of evidence from experimental animal studies is limited. When the absence of epidemiological evidence is considered with the limited animal evidence, the overall evaluation of DCM using the criteria of the International Agency for Research on Cancer is a Group 3 chemical in that it cannot be classified as to its carcinogenic potential for humans.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-09-2	METHYLENE CHLORIDE

PB85-192219/REB
Rapid Assessment of Exposure to Particulate Emissions from Surface Contamination Sites
EPA, Washington, DC, OHEA
Midwest Research Institute
C. Cowherd, et al.
Feb 85, 159p, EPA-600/8-85-002, PC A08

Abstract: Emergency response actions at chemical spills and abandoned hazardous waste sites often require rapid assessment of (a) the potential for atmospheric contamination by the chemical or waste compound and (b) the inhalation exposure of people living in the vicinity of a surface contamination site. This manual provides a methodology for rapid assessment of inhalation exposure to respirable particulate emissions from surface contamination sites. Respirable particulate matter is defined as airborne particles equal to or smaller than 10 micrometers aerodynamic diameter. The methodology consists of a site survey procedure, particulate emission factor equations for wind and mechanical entrainment processes, procedures for mapping atmospheric contaminant concentration distributions by scaling the output of pre-solved computer models of regional atmospheric dispersion, and an equation for calculation of inhalation exposure. In addition to the components of the methodology, this manual discusses critical contaminant and site characteristics, describes assumptions and limitations of the procedures, and presents example applications.

CL-PM	PARTICULATE MATTER
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-192847/REB
Innovative Thermal Hazardous Waste Treatment Processes
EPA, Cincinnati, OH, HWERL
H.M. Freeman
Apr 85, 135p, EPA-600/2-85-049, PC A07/MF A01

Abstract: This report contains discussions of 21 thermal processes identified by the U.S. Environmental Protection Agency (U.S. EPA) as innovative processes for treating or destroying hazardous organic wastes. The subject processes were identified through two national solicitations for innovative processes and several extensive literature surveys. Information about the subject processes was provided voluntarily by the process developers. The criteria used for selection of a process for the report included the innovativeness of the process when compared with conventional existing processes and the potential contribution the process could make to the evolving field of hazardous waste management technology.

CL-HAZWAST	HAZARDOUS WASTES
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-196418/REB
Evaluation of Passive Sampling Devices (PSDs)
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
R.W. Coutant
Apr 85, 74p, EPA-600/4-85-034, PC A04/MF A01

Abstract: The basic objectives of this study were to evaluate the performance of the EPA passive sampling device (PSD) for sampling of ambient level volatile organic compounds (VOC's); to develop an understanding of the mechanics of passive sampling using reversible adsorption; and to apply this understanding to development of an improved PSD that is usable for sampling of VOC's over periods of 8 to 24 hours. Laboratory and limited field evaluations of the standard and modified PSD's were conducted and a model relating sorbent properties and device design to sampling rates was developed. The results show the standard PSD's to be useful for sampling of VOC's having large retention volumes. Modified PSD's having greatly reduced sampling rates show promise for sampling compounds having retention volumes as low as 5 to 10 L/g over 8 to 24 hours sampling periods. The use of Spherocarb as an alternative sorbent to Tenax GC also was investigated as a means for improving the performance of the PSD. This sorbent was found to be unsuitable because of the high temperatures required for desorption. It is recommended that the model which was developed be used for developing sampling plans for specific applications, and that more extensive field evaluation of the reduced-rate PSD's be conducted.

AM	AMBIENT MONITORING
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-197820/REB
Literature Review and Survey of Emissions from Residential Wood Combustion and Their Impact
EPA, Research Triangle Park, NC, AEERL
Radian Corp.
M.W. Hartman, G.D. Rives
Apr 85, 108p, EPA-600/2-85-047, PC A06/MF A01

Abstract: The report gives results of a literature search of 53 reports covering woodstove design, operating conditions, emissions, testing methods, and ambient air impacts. The woodstoves studied, both controlled (catalytic) and uncontrolled, varied in design from simple to complex. The primary considerations in operating conditions were that the stoves burned primarily cord wood. Test results were segregated by the type of wood utilized, the percent moisture in the tested wood, the burn rate of the wood, the stage of burning that was tested, and the length of the test. In addition to the operating conditions, the emissions were qualified by the test method that was performed, the firebox temperature, and the stack temperature. Emission parameters studied included particulate matter (PM), carbon monoxide, nitrogen oxides, hydrocarbons (HC), and polycyclic organic material, especially benzo-a-pyrene. This report includes ambient air impact surveys at various locations in the U.S. Most ambient studies were concerned with the PM and HC impacts, but a few looked at relating these impacts back to their sources.

CL-PM	PARTICULATE MATTER
CL-POM	POLYCYCLIC ORGANIC MATTER
CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
50-32-8	BENZO(A)PYRENE
630-08-0	CARBON MONOXIDE

PB85-198356/REB
Volatile Organic Compounds in Indoor Air: A Survey of Various Structures
EPA, Research Triangle Park, NC, EMSL
J.D. Pleil, K. Oliver, and W.A. McClenny
1985, 15p, EPA-600/D-85-100, PC A02/MF A01

Abstract: Co-workers collected indoor air samples in their homes in SUMMA polished canisters. Upon receipt in the laboratory, the whole air samples were analyzed for volatile organic compounds (VOCs) using cryogenic sample preconcentration and subsequent capillary column chromatography. Each homeowner was asked to fill out a questionnaire concerning physical, structural and activity-related characteristics that could affect VOC concentrations. Simultaneous flame ionization and electron capture detection yielded quantitative concerntration data in a range 0.1 to 10 ppbv for 19 calibration compounds. Certain other compounds could also be identified and quantified based upon occasional analyses of appropriate standards. These data are presented in three sample groups; summer indoor samples, winter indoor samples, and combined summer and winter outdoor samples. In addition, some probable corrections between residential characteristics and the occurrence of various compounds in indoor air are discussed.

CL-IAP	INDOOR AIR POLLUTANTS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING

PB85-203792/REB
Evaluation of Air Emissions from Hazardous Waste Treatment, Storage, and Disposal Facilities
EPA, Cincinnati, OH, HWERL
Radian Corp.
W.D. Balfour, R.G. Wetherold, D.L. Lewis
May 85, 81p, EPA-600/2-85-057, PC A05/MF A01

Abstract: This study has examined the fugitive air emissions from landfills, surface impoundments, storage tanks, containers (drums), solvent recovery processes, and land treatment technologies at hazardous waste disposal facilities (HWDF's). The main objective of this study was to develop and demonstrate techniques for determining air emissions from the above HWDF technologies (sources). Various predictive models for estimating air emissions exist for some of these sources. These models have been identified and evaluated for applicability to select HWDF's. Sampling approaches have been identified for Procedures for the collection and qualitative and quantitative analysis of the air samples and the liquid and solid samples taken in conjunction with the air samples have also been developed. The resulting analytical data have provided general information on the level of air emissions from the sources studied. This document summarizes the findings from each of four HWDF's tested, comparing and contrasting the measured and predicted emission results and the experiences gained in using the various sampling approaches.

CL-HAZWAST	HAZARDOUS WASTES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-205144/REB
Second Review of Standards of Performance for Sewage Sludge Incinerators
EPA, Research Triangle Park, NC, OAQPS
Mar 84, 139p, EPA-450/3-84-010, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-SEWSLUD	SEWAGE SLUDGE
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB85-205516/REB
Sources of Ethylene Oxide Emissions
EPA, Research Triangle Park, NC, OAQPS
D.W. Markwordt
Apr 85, 86p, EPA-450/3-85-014, PC A05/MF A01

Abstract: The objective of this report is to present the results of a preliminary source assessment study conducted for ethylene oxide in which emission, cost, and dispersion data were developed that will aid in evaluating the need for further regulatory development for ethylene oxide.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
75-21-8	ETHYLENE OXIDE

PB85-207462/REB
Teratogenic Effects of Microwave Radiation
EPA, Research Triangle Park, NC, HERL
Tulsa University, OK
M.E. O'Connor, R. Strattan
May 85, 43p, EPA-600/1-85-007, PC A03/MF A01

Abstract: Pregnant CF-1 mice were exposed to 2450-MHz CW microwave irradiation at power densities of 0, 10, or 30 mW/sq. cm for 6 hours daily from gestational day 1 through day 18. All exposures occurred in an anechoic chamber maintained at 50% relative humidity with air temperature of 22C. A group of pregnant colony cage-controlled mice was maintained for each of the three exposure groups. Teratogenic examinations were performed on day 18 following caesarean section of the maternal subject. Every third fetus was stained with alazarin red and examined for skeletal abnormalities. No significant differences between the groups were observed for fetal body mass, fetal brain mass, resorption, live fetuses, gross abnormalities, or skeletal abnormalities.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
TT	TOXICITY TESTING
36	ELECTRIC AND ELECTRONIC EQUIPMENT
363	HOUSEHOLD APPLIANCES
3631	HOUSEHOLD COOKING EQUIPMENT

PB85-207876/REB
Impact of Suspect Hazard Designation on Chemical Use and Activity: A Pilot Study
EPA, Washington, DC, OPTS
Heiden Associates, Inc.
E.V. Heiden, M.E. Eads
May 85, 285p, EPA-560/4-85-003, PC A13/MF A01

Abstract: How chemical firms regulated by EPA respond when their products are designated as suspect toxic hazards (as distinguished from being formally regulated) was the subject of a pilot study to: (1) determine the types of public data and methodological approaches available to study the problem; and (2) assess and measure actual impact based on (1). Ten chemicals were selected for initial study, based on: (1) their presence on NIOSH and EPA or OSHA lists of potential carcinogenic substances; (2) availability of sufficient public data for analysis (3) reasonable diversity and representativeness. A total of 28 categories of production or use were studied for these ten chemicals. They were supplemented by eight uses for three additional chemicals in some of the analyses conducted. Economic case history studies and formal econometric statistical models were the investigation tools used. It was concluded that although important data gaps and limitations in economic methodology existed in this pilot study, sufficient public data were available for a number of chemicals to conduct a meaningful pilot assessment of the impact of suspect hazard designation on their production/use, and that for these chemicals suspect hazard designation had a significant impact on production/consumption.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE
28	CHEMICALS AND ALLIED PRODUCTS

PB85-208965/XAB
Study of Coal Liquefaction and Gasification Plants: An Industrial Hygiene Assessment, a Control Technology Assessment, and the Development of Sampling and Analytical Techniques, Volume 1, Industrial Hygiene Study of Coal Liquefaction Processes
National Institute of Occupational Safety and Health
1983, 196p, PC A09/MF A01

Abstract: Environmental and personal samples were analyzed for polynuclear aromatic (PNA) compounds including polycyclic aromatic hydrocarbons and aromatic amines, benzene (71432), toluene (108883), xylene (1330207), anilines, phenols, carbon monoxide (630080), and hydrogen sulfide (7783064) at five program coal liquefaction (SIC-3312) pilot facilities. The industrial hygiene programs were reviewed. The most significant exposures were from PNA. Highest PNA exposures were connected with maintenance activities in the process areas. Most occupational health programs included a preemployment physical, annual checkups, and a termination physical. Protective clothing was provided by all facilities, however, most facilities did not monitor clothing or personnel for residual contamination. The authors conclude that workers at all facilities are exposed to PNA. Recommendations include establishing a standardized medical monitoring protocol and developing methods for decontaminating protective clothing and equipment.

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
108-88-3	TOLUENE
1330-20-7	XYLENE
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
630-08-0	CARBON MONOXIDE
71-43-2	BENZENE
7783-06-4	HYDROGEN SULFIDE

PB85-208973/XAB
Study of Coal Liquefaction and Gasification Plants: An Industrial Hygiene Assessment, a Control Technology Assessment, and the Development of Sampling and Analytical Techniques, Volume 2, Industrial Hygiene Study of Coal Gasification Processes
National Institute of Occupational Safety and Health
1983, 188p, PC A09/MF A01

Abstract: Environmental and breathing zone samples were analyzed for polynuclear aromatic (PNA) compounds including polycyclic aromatic hydrocarbons and aromatic amine, benzene (71432), toluene (108883), xylene (1330207), anilines, phenols, carbon monoxide (630080), and hydrogen sulfide (7783064) at three coal gasification (SIC-3312) facilities. Industrial hygiene programs were reviewed. The other substances were rarely found at concentrations above the detection limit. All facilities provided physical examinations and periodic medical histories. Two provided skin examinations, urinalyses, and blood counts. Work practices were directed toward reducing skin contact with process components. These included isolation, draining and flushing, and cleaning. The authors conclude that workers at all facilities are exposed to PNA. They recommend developing methods for decontaminating protective clothing and equipment, and conducting studies on long-term effects of PNA inhalation.

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
108-88-3	TOLUENE
1330-20-7	XYLENE
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
630-08-0	CARBON MONOXIDE
71-43-2	BENZENE
7783-06-4	HYDROGEN SULFIDE

PB85-210176/REB
Develop, Evaluate and Validate Continuous Emission Monitors for Designated Hazardous Pollutants
EPA, Research Triangle Park, NC, EMSL
Midwest Research Institute
G.W. Scheil
May 85, 75p, EPA-600/4-85-037, PC A04/MF A01

Abstract: The objectives of the project are to assess the state of the art of continuous emission monitoring of vinyl chloride monomer (VCM) and to conduct actual experiments to evaluate two monitors in laboratory and in a six-month field testing program. A process GC with flame ionization detector and a photoionization detector were used during this study. Three one-week EPA Method 106 tests were conducted during the six-month field testing program to measure the relative accuracies of the monitors. The precision of both types of detectors all were in the 1% range when evaluated in laboratory. The relative accuracies for both types of detectors were < 10% for VCM concentration between 2 to 10 ppm.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
75-01-4	VINYL CHLORIDE

PB85-212306/REB
Indoor Air Quality Modeling Workshop Report
EPA, Research Triangle Park, NC, EMSL
Nat'l Bureau of Stand. (NEL)
P.E. McNall
May 85, 16p, PC A02/MF A01

Abstract: Comprehensive modeling of emission, absorption, movement, and controls of indoor air contaminants is essential for developing national policy for IAQ assessment and controls. This report describes several topics discussed in a workshop on indoor air quality, which was held on February 11, 1985 at the National Bureau of Standards. Researchers on IAQ modeling were invited to state their current activities, identify future research needs and recommend specific parameters and contaminants to be included in the IAQ models. The input thus obtained in this workshop will be incorporated in an advanced simulation model for IAQ, to be developed by NBS under a contract with EPA.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
PRA	PRE-REGULATORY ASSESSMENT

PB85-214310/XAB
Dioxin Transport from Contaminated Sites to Exposure Locations: A Methodology for Calculating Conversion Factors
EPA, Washington, DC, OHEA
Battelle Project Management Division
G.W. Dawson, J.M. Meuser, M.C. Lilga
Jun 85, 88p, EPA-600/8-85-012, PC A05/MF A01

Abstract: Procedures have been developed by US EPA for estimating the risk associated with exposure to 2,3,7,8- tetrachlorodibenzo-p-dioxin (dioxin). Concentrations of dioxin at the contaminant source are usually known, but exposure may occur at locations away from the source where concentrations are usually unknown. As a result, a need was identified for estimating dioxin concentrations away from the source. The report discusses the transport of dioxin and presents methods for estimating dioxin concentrations at potential points of exposure away from a source. The transport pathways that were considered to be important were volatilization, suspension and deposition of windblown particles, overland sediment runoff, and in-stream sediment transport. Concentrations at locations away from a source can be estimated using conversion factors for air, soil, and sediment. Concentrations in these media at potential points of exposure can be estimated using the source concentration and factors tha describe the physical characteristics of the source and the transport pathways. Because ingestion of contaminated food-stuffs will result i exposure to dioxin, an example is provided for estimating the amount o dioxin in Missouri beef using distribution patterns and a market dilution concept to estimate chronic exposure within the state.

CL-DIOXIN	DIOXINS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB85-215333/REB
Destruction of VOCs (Volatile Organic Compounds) by a Catalytic Paint Drying (Infrared) Device
EPA, Research Triangle Park, NC, AEERL
University of Central Florida, Orlando
C.D. Cooper
Jun 85, 73p, EPA-600/2-85-064, PC A04/MF A01

Abstract: The report gives results of tests of a device that catalytically oxidizes fuel to generate infrared (IR) radiation as a new technology for paint drying and curing. During its operation, the device (introduced by SUNKISS Thermoreactors, Inc.) also oxidizes some of the paint solvents that are evaporated in the oven, thus reducing overall emissions of volatile organic compounds (VOCs) into the atmosphere. The system used to test the SUNKISS device was constructed at the University of Central Florida (UCF). It consists of flow control and measuring devices, analytical equipment, and a 1 cu m chamber in which the SUNKISS device was mounted. Three paint solvents--hexane, methyl ethyl ketone (MEK), and toluene--were dispersed in air streams that flowed through the test chamber at various rates. The solvent destruction efficiency of the device was shown to be a strong function of the air residence time in the chamber, but was independent of VOC concentration. Hexane and MEK behaved similarly, while toluene was more reactive. Observed destruction efficiencies ranged from < 20% to > 50%.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
108-88-3	TOLUENE
110-54-3	HEXANE,N-
28	CHEMICALS AND ALLIED PRODUCTS
285	PAINTS AND ALLIED PRODUCTS
78-93-3	BUTANONE,2-

PB85-218683/XAB
Occupational Characteristics of Cancer Victims in Massachusetts 1971-1973
National Institute for Occupational Safety and Health
Sep 84, 193p, PC E09/MF$7.25
NIOSH Pub No. 84-109, AVAIL NIOSH

Abstract: The study examines cancer mortality patterns by occupation for white males in the state of Massachusetts using death records for the years 1971-1973. Its purpose is to identify occupation-cancer associations which, when interpreted in conjuction with results from other studies and hypotheses about potential occupational carcinogens, can serve as leads for more definitive etiological investigations.

CL-CARCIN	CARCINOGENS
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH

PB85-220325/XAB
Study of Coal Liquefaction and Gasification Plants: Volume 4, A Method for Sampling and Analysis of Polynuclear Aromatic Hydrocarbons in Coal Conversion Plants and Petroleum Refineries
National Institute of Occupational Safety and Health 1982, 44p, PC A03/MF A01

Abstract: Methods of sampling and analysis of polynuclear aromatic (PNA) compounds used in industrial hygiene studies of coal liquefaction and gasification facilities were described. Personal and area air samples were collected in cassettes containing 200 milligrams or 25 grams, respectively, of Chromosorb 102. Flow rates during area sampling, 1.5 liter per minute. After collection, the samples were extracted with 300 milliliters (ml) of a methylene-chloride/methanol mixture in a Soxhlet apparatus. The precision of the method was determined by analyzing samples spiked with 11 PNA. Stability of the samples was not significantly affected by storage up to 30 days. Relative standard deviations of the spiked samples ranged from 11.0 percent for 100 nanograms (ng) of 2-methylphenanthrene (2531842) to 66.7 percent for 10ng of dibenz(a,i)pyrene (189559).

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
SS	SOURCE SAMPLING
189-55-9	BENZO(R,S,T)PENTAPHENE
2531-84-2	2-METHYLPHENANTHRENE
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

PB85-221661/XAB
Survey of Carbon Tetrachloride Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
R.H. Howle, S.A. Shareef, J.A. Kowalski
Jul 85, 225p, EPA-450/3-85-018, PC A10/MF A01

Abstract: The document contains information on sources, current emission rates, current emission controls, and cost estimates for additional emission reductions.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
56-23-5	CARBON TETRACHLORIDE

PB85-223196/XAB
Health Hazard Control Technology Assessment of the Silica Flour Milling Industry
National Institute for Occupational Safety and Health
Oct 84, 62p, PC A04/MF A01
NIOSH Pub No. 84-110, AVAIL NIOSH

Abstract: A health hazard control assessment of the silica (7631869) flour milling industry (SIC-0723) was conducted. Three silica flour mills were evaluated indepth. Engineering controls consisted of local exhaust ventilation of bulk loading operations, injecting agglomerating agents such as water and a commercial foam into products, spraying water on the outer surface of electrostatic devices to agglomerate airborne dust in high dust areas such as rail car loading. All three facilities conducted environmental monitoring of airborne dust concentrations and provided medical monitoring to prevent dust dispersion, prompt cleanup of spills, and regular inspection and preventive maintenance of equipment. At eac facility, management personnel indicated that half of their dust control problems were controlled by effective housekeeping and maintenance procedures. The authors conclude that engineering controls and work practices have generally reduced respirable silica concentrations to below 100 microg/cu m. Recommendations include establishing an effective respirator program and developing stronger leak proof bags.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
SA	SOURCE ASSESSMENT
32	STONE, CLAY, AND GLASS PRODUCTS
7631-86-9	SILICA

PB85-225027/XAB
Development of an Optical Monitor for Toxic Organic Compounds in Air
EPA, Research Triangle Park, NC, EMSL
California University, Berkeley
T. Hadeishi, et al.
Jun 85, 42p, EPA-600/4-85-043, PC A03/MF A01

Abstract: The objectives of the study were: (a) to design, construct and deliver a prototype atomic line molecular spectrometer (ALMS) benzene monitor and (b) to locate matches of atomic lines and sharp molecular absorption features in other toxic organic compounds for possible use in ALMS or TALMS techniques. ALMS and TALMS are newly developed, high resolution molecular absorption techniques which are used in the vacuum untraviolet and ultraviolet regions of the optical spectrum to detect organic molecules in the gas phase. The dual beam prototype ALMS instrument was designed, constructed, tested and delivered to the Environmental Monitoring Systems Laboratory, U.S. EPA Research Triangle Park, North Carolina, in December, 1984. It was designed for monitoring benzene and other organic compounds with the 184.9 and 253.7 nm mercury lines.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
71-43-2	BENZENE

PB85-225175/XAB
Air Toxics Problem in the United States: An Analysis of Cancer Risks for Selected Pollutants
EPA, Washington, DC, OAR
E. Haemisegger, et. al.
May 85, 127p, EPA-450/1-85-001, PC A07/MF A01

Abstract: The report presents estimates of the national cancer incidence associated with about 25 common potential carcinogens found in ambient air. Exposures are estimated using both air quality data and emission-dispersion model techniques. The report on the air toxic problem in the United States is a final version of a September 1984 draft document entitled 'The Magnitude and Nature of the Air Toxics Problem in the United States.' Simultaneously with release of the draft report, EPA solicited comments on the analysis from a peer revie panel made up of non-EPA experts in fields such as toxicology, air monitoring, and air pollution control.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB85-227759/XAB
Review of Sampling and Analysis Methodology for Polynuclear Aromatic Compounds in Air from Mobile Sources
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, B.A. Petersen
Jun 85, 68p, EPA-600/4-85-045, PC A04/MF A01

Abstract: The objective of the program was to review and recommend test compounds and sampling and analysis methods for a future EPA stud of polynuclear aromatic hydrocarbons (PAH) in microenvironments. Review of PAH profiles in ambient air indicated that concentrations of PAH were generally higher in winter than summer and varied with climat and between sampling sites within an urban area. Levels of several PA were found to be proportional to traffic density. Studies of the biological activity of ambient air samples showed that some PAH and their nitrated derivatives are extremely carcinogenic and mutagenic. The following compounds were determined to be the most prevalent and mutagenic in ambient air and were recommended for future study: phenanthrene, pyrene, cyclopenta(c,d)pyrene, benzo(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthracene, 1-nitropyrene, fluoranthrene, benzo(e)pyrene, benzo(g,h,i)perylene, coronene, and 3-nitrofluoranthene. In the review of PAH sampling methods, collectio of both gaseous and particulate-bound PAH was determined to be necessary to accurately characterize health effects of PAH in ambient air. Most studies have used filters to sample particulate-bound PAH and absorbents to collect vapor phase PAH. The major sampling problem encountered were PAH losses due to volatilization and reactivity.

AM	AMBIENT MONITORING
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION

PB85-228120/XAB
Respiratory Carcinogenicity of Diesel Fuel Emissions
EPA, Research Triangle Park, NC, HERL
IIT Research Institute
A.M. Shefner, et al.
Jan 85, 311p, EPA-600/1-85-004, PC A14/MF A01

Abstract: The carcinogenicity of diesel exhaust particles (administered by fifteen weekly intratracheal instillations) was compared to that of organic extracts of diesel particles, coke oven emissions, roofing tar condensate and cigarette smoke condensate. Appropriate solvent controls, untreated controls and positive controls were included in the design of the experiment. The overall incidence of respiratory tract tumors in any of the treatment groups was not significantly higher than in control hamsters. Similarly, there were no significant differences in the survival rates of hamsters treated with test materials from those of their respective controls. Hamsters treated with test material generally showed significantly lower mean body weights than control animals. Treated hamsters generally showed delay in time to reach maximum body weight when compared to hamsters i control group. Treatment of hamsters with test materials induced a variety of hyperplastic, proliferative and inflammatory lesions of the respiratory tract. The highest incidence rates and greatest severity of the lesions were induced by diesel exhaust particles and coke oven emissions. Diesel exhaust extract and benzo(a)pyrene were less reactive, and cigarette smoke condensate and roofing tar volatiles produced the lowest incidence of respiratory tract lesions.

CL-CARCIN	CARCINOGENS
CL-DIESEL	DIESEL FUEL EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
411	LOCAL AND SUBURBAN TRANSPORTATION
4111	LOCAL AND SUBURBAN TRANSIT

PB85-230449
Toxicology and Carcinogenesis Studies of 1,3-Dichloropropene (Telone II) (CAS No. 542-75-6)
NTP, Research Triangle Park, NC
May 85, 155p, NCI/NTP TR-269, PC A08/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
542-75-6	DICHLOROPROPENE,1,3-

PB85-233112/XAB
Equipment Leaks of VOC (Volatile Organic Compound) in Natural Gas Production Industry - Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
May 85, 121p, EPA-450/3-82-024B, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
13	OIL AND GAS EXTRACTION
132	NATURAL GAS LIQUIDS
1321	NATURAL GAS LIQUIDS

PB85-233492/XAB
Ambient Monitoring for PCB Near Three Landfills in the Bloomington, Indiana Area
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
D.L. Sgontz, J.E. Howes
Jun 85, 145p, EPA-600/4-85-044, PC A07/MF A01

Abstract: A monitoring program was conducted to determine PCB levels in ambient air on and in the vicinity of three landfills in the Bloomington, Indiana area. Fixed-height measurements were made at locations on the sites where capacitors containing PCB were exposed (hot spots) and at nominally upwind and downwind locations. Vertical PCB concentration profiles were also obtained at five elevations (2 to 180 cm) above selected hot spots. Sampling was performed over 8-hour daytime periods (approximately 0900-1700 hours) and over 24-hour periods at various on- and off-site locations. Polyurethane foam (PUF cartridges used either with Du Pont personal-type sampling pumps or EPA-developed high volume samplers were used for collection of PCB fro the ambient air. The quantity of PCB (as Aroclor 1242) in the PUF cartridges was determined by extraction and analysis of the extract by electron-capture gas chromatography (EPA Method 608). Meteorological conditions were also measured at the sites during the field monitoring period.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB85-233518/XAB
Survey of Perchloroethylene Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Jun 85, 133p, EPA-450/3-85-017, PC A07/MF A01

Abstract: The potential health impact of perchloroethylene emissions is being investigated. The document contains information on the sources of perchloroethylene emissions, current emission levels, and State regulations applicable to emission sources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
127-18-4	TETRACHLOROETHYLENE
72	PERSONAL SERVICES
721	LAUNDRY, CLEANING, & GARMENT SERVICES
7211	POWER LAUNDRIES, FAMILY & COMMERCIAL
7212	GARMENT PRESSING & CLEANERS' AGENTS
7216	DRY CLEANING PLANTS, EXCEPT RUG
75	AUTO REPAIR, SERVICES, AND GARAGES
753	AUTOMOTIVE REPAIR SHOPS

PB85-233658/REB
Emissions Characterization of Heavy-Duty Diesel and Gasoline Engines and Vehicles
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
T.L. Ullman and C.T. Hare
May 85, 346p, EPA-460/3-85-001, PC A15/MF A01

Abstract: Laboratory emissions evaluations were performed on heavy-duty diesel and gasoline engines and vehicles. Results from using water injection (unstabilized macroemulsion formed in the injection pump) on a heavy-duty diesel engine showed major reductions in particulate and NOx emissions, except during idle and light load conditions. Test work carried out on the heavy-duty gasoline engine running at high load confirmed that BaP emissions did exist, but that the levels emitted were low, and that they decreased with leaner f/a ratio. Selected maladjustments (simulating wear of inadequate maintenance) of the Cummins VTB-903 substantially increased HC, smoke and particulate emission levels. Maladjustments of the Detroit Diesel 6V-71N coach engine resulted in lower HC and NOx emission levels, but higher CO emissions, smoke, and particulate. Emissions over various chassis test cycles from three in-service transit buses proved to be highly variable from one bus to another. In addition, emissions from each bus were very test cycle-sensitive.

CL-ALDEHYD	ALDEHYDES
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
10102-44-0	NITROGEN DIOXIDE
124-38-9	CARBON DIOXIDE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
42	TRUCKING AND WAREHOUSING
630-08-0	CARBON MONOXIDE

PB85-234391/XAB
Control Technology Assessment: Metal Plating and Cleaning Operations
National Institute of Occupational Safety and Health
Sheehy, J.W.; Mortimer, V.D.; Jones, J.H.; Spottswood, S.E. Dec 84, 119p, PC A06/MF A01

Abstract: A survey of control technology of electroplating and cleaning operations in the metal plating industry (SIC)-3471) was conducted. Walkthrough surveys were conducted at 30 facilities and in-depth surveys at 8 installations. Control measures were evaluated primarily by collecting environmental samples at 64 plating and cleaning tanks and by measuring airflows around the tanks. The surveys concentrated on hard chromium (7440473) plating tanks, of which there were 31.

CT	CONTROL TECHNOLOGY DOCUMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
34	FABRICATED METAL PRODUCTS
347	METAL SERVICES, NEC
3471	PLATING AND POLISHING
7440-47-3	CHROMIUM

PB85-236099/XAB
Metabolic Activation Pathways of Cyclopenta-Fused PAH (Polycyclic Aromatic Hydrocarbons) and Their Relationship to Genetic and Carcinogenic Activity
EPA, Research Triangle Park, NC, HERL
S. Nesnow, et al.
Aug 85, 12p, EPA-600/D-85-161, PC A02/MF A01

Abstract: Cyclopenta-fused PAH are a novel class of environmental PAH of which the best known example is cyclopenta(c,d)pyrene. The fusion of an unsaturated cyclopenta-ring onto a PAH markedly enhances its activity as: (1) a gene mutagen in bacteria and cultured mammalian cells, (2) a transforming agent in rodent cells, and (3) as an initiator of mouse skin tumors. A series of four cyclopenta-fused isomers of benz(a)anthracene and the cyclopenta-fused isomers of anthracene and phenanthrene were studied with respect to: (1) the major rat liver microsomal metabolites, (2) their activity as gene mutagens in Salmonella typhimurium and Chinese hamster V79 cells, and (3) their ability to morphologically transform C3H10T1/2CL8 mouse embryo fibroblasts. For all six isomers, the dihydrodiol arising from oxidation and hydration at the cyclopenta-ring was a major pathway in Aroclor-1254 induced rat liver microsomes. All six isomers were activ in mutating Salmonella typhimurium. The four benz(a)anthracene isomer were also active in mutating V79 cells at the HGPRT locus.

CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
11097-69-1	AROCLOR 1254
120-12-7	ANTHRACENE
56-55-3	BENZ(A)ANTHRACENE

PB85-239630/XAB
Emergency and Continuous Exposure Guidance Levels for Selected Airborn Contaminants. Volume 4
National Academy of Sciences
May 85, 113p, PC A06/MF A01

Abstract: These are emergency exposure guidance levels recommended by the National Research Council Committee on Toxicology for chemicals of interest to the U.S. Armed Forces because they may affect personnel during various operations. The report provides a short review of the chemical and physical properties of the chemicals and their toxic-potential in animals and humans.

CL-CARCIN	CARCINOGENS
EA	EXPOSURE ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY
9711	NATIONAL SECURITY

PB85-239952/XAB
Nonmetallic Mineral Processing Plants: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
J.R. Farmer
Apr 85, 96p, EPA-450/3-83-001B, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3299	NONMETALLIC MINERAL PRODUCTS, NEC

PB85-240083/XAB
Prudent Practices for Disposal of Chemicals from Laboratories
National Research Council
1983, 297p, PC A13/MF A01
ISBN 0-309-03390-X, $16.50

Abstract: All laboratory work with chemicals eventually produces chemical waste, and those who generate such waste have moral and legal obligations to see that the waste is handled and disposed of in ways that pose minimum potential harm, both short term and long term, to health and the environment. The objectives of this report are to present guidelines for laboratories in establishing a waste management system, to give specific recommendations to laboratory managers for th disposal of chemicals, and to make recommendations for constructive changes in regulations for disposal of chemicals from laboratories. This guide thoroughly assesses the full range of hazards encountered i laboratories and provides recommendations for handling dangerous substances in both ordinary and emergency situations.

CL-HAZWAST	HAZARDOUS WASTES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
SA	SOURCE ASSESSMENT
73	BUSINESS SERVICES
739	MISCELLANEOUS BUSINESS SERVICES
7391	RESEARCH & DEVELOPMENT LABORATORIES
7395	PHOTOFINISHING LABORATORIES
7397	COMMERCIAL TESTING LABORATORIES
7399	BUSINESS SERVICES, NEC

PB85-240455/XAB
Methodology for Characterization of Uncertainty in Exposure Assessment
EPA, Washington, DC, OHEA
Research Triangle Institute
R.W. Whitmore
Aug 85, 196p, EPA-600/8-85-009, PC A09/MF A01

Abstract: Exposure assessments, except those based upon measured exposure levels for a probability sample of population members, rely upon a model to predict exposure. The model may be any mathematical function that estimates the population distribution of exposure or an individual's exposure as a function of one or more input variables. Whenever a model that has not been validated is used as the basis for an exposure assessment, the uncertainty associated with the exposure assessment may be substantial. The primary characterization of uncertainty is at least partly qualitative in this case, i.e., it includes a description of the assumptions inherent in the model and their justification. Sensitivity of the exposure assessment to model formulation can be investigated by replicating the assessment for plausible alternative models. When an exposure assessment is based upon directly measured exposure levels for a probability sample of population members, uncertainty can be greatly reduced and described quantitatively. The primary sources of uncertainty are measurement errors and sampling errors. A quality assurance program should be designed into the study to ensure that the magnitude of measurement errors can be estimated. The effects of all sources of random error should be measured quantitatively.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB85-241800/XAB
Assessment of the Mutagenic Potential of Carbon Disulfide, Carbon Tetrachloride, Dichloromethane, Ethylene Dichloride, and Methyl Bromide: A Comparative Analysis in Relation to Ethylene Dibromide
EPA, Washington, DC, OHEA
V.L. Vaughan-Dellarco. J.R. Fowle, S. Rosenthal
Aug 85, 154p, EPA-600/6-85-001, PC A08/MF A01

Abstract: The document provides an evaluation of the mutagenic potential of five alternative fumigants to ethylene dibromide(EDB). These include carbon disulfide(CS2), carbon tetrachloride(CC14), dichloromethane(DCM), ethylene dichloride(EDC), and methyl bromide (MB). Of the five proposed alternatives, DCM, EDC and MB caused gene mutations in lower and higher eucaryotes. These three agents have not been well studied for their potential to cause chromosome damage. There are no available data on the ability of these agents to cause gene mutations in whole mammals, except for EDC, for which the evidenc is suggestive. The potential of the alternatives to reach whole mamma germcell DNA has not been studied. But DCM, EDC, and MB do cause heritable effects in Drosophila. The mutagenic potencies of each agen were compared within and amoung various assay systems. Regarding the strength of mutagenicity, EDB is clearly a stronger mutagen than any o the proposed alternative fumigants. Differences in mutagenicity potency among the alternatives cannot be delineated because of limited data usually derived from different laboratories. When final judgment could not be reached because of gaps in current knowledge, recommendations were made on additional studies.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
106-93-4	ETHYLENE DIBROMIDE
107-06-2	ETHYLENE DICHLORIDE
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
56-23-5	CARBON TETRACHLORIDE
74-83-9	METHYL BROMIDE
75-09-2	METHYLENE CHLORIDE
75-15-0	CARBON DISULFIDE

PB85-242667/REB
Development of Statistical Distributions or Ranges of Standard Factors Used in Exposure Assessments
EPA, Washington, DC, OHEA
GCA Corp.
E. Anderson et al.
Aug 85, 183p, EPA-600/8-85-010, PC A09/MF A01

Abstract: The document is intended to support EPA's Exposure Assessment Guidelines by providing data and information on standard factors that are used to calculate human exposure to toxic substances. Statistical distributions or ranges of values were developed for body weight, skin surface area, and ventilation rates. Percentile distributions of body weight were computed from the Second National Health and Nutrition Examination Survey (NHANES II) data base using a computer program that performs variance estimation of multistage sample data using the Jack-knife Repeated Replicate approach. Distributions of skin surface areas were similarly calculated from NHANES height and weight data by applying regression equations that were either located in the literature or were developed by multi-variate analysis of available measurements. Insufficient data precluded the development of distributions of ventilation rates. Minimum, maximum, and mean values of minute ventilation at three activity levels were calculated from available measurements. Activity pattern information is presented to permit the calculation of time-weighted average ventilation rates.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB85-243533/XAB
Updated Mutagenicity and Carcinogenicity Assessment of Cadmium: Addendum to the Health Assessment Document for Cadmium
EPA, Washington, DC, OHEA
Jun 85, 206p, EPA-600/8-83-025F, PC A10/MF A01

Abstract: The document evaluates the mutagenicity and carcinogenicity of cadmium, supplementing an earlier document (Health Assessment Document for Cadmium, May 1981) which dealt with all health effects. Since the earlier document was prepared, a rat inhalation carcinogenicity study has been reported and several epidemiology and mutagenicity papers have been published. This document concludes that (1) there is mixed evidence on the mutagenicity of various cadmium salts; (2) cadmium chloride aerosol induces lung cancer in rats; (3) injected cadmium salts induce injection site sarcomas and testicular tumors in both mice and rats; (4) there is limited epidemiologic evidence that inhaled cadmium is dose-related to lung cancer in expose workers; (5) there is no evidence that cadmium is carcinogenic via ingestion, which is a major route of human exposure, and the upper limit of potency via ingestion is at least 100 times less than via inhalation.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2816	INORGANIC PIGMENTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
3333	PRIMARY ZINC
3339	PRIMARY NONFERROUS METALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB85-245280/XAB
Industrial Process Profiles for Environmental Use. Chapter 10. The Plastics and Resins Production Industry
EPA, Cincinnati, OH, WERL
Radian Corp.
Jul 85, 759p, EPA-600/2-85-085, PC A99/MF E03

Abstracts: The report presents a detailed analysis of the plastics an resins production industry, which includes operations that convert industrial organic chemicals into solid or liquid polymers. Elements of the analysis include an industry definition, raw materials, product and manufacturers, environmental impacts, and occupational health concerns. The following polymers are discussed: acrylic resins, acrylonitrile-butadiene-styrene (ABS), alkyd molding resins, amino resins, engineering thermoplastics, epoxies, fluoropolymers, phenolic resins, polyacetal, polyamides, polimides, polyolefins (polybutylene, polyethylenes, polyproplyene), polycarbonate, polyesters, polystyrenes polyurethane, polyvinyl acetate and alcohol, polyvinyl chloride, polyvinylidene chloride, and styrene-acrylonitrile (SAN).

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS
62-75-9	N-NITROSODIMETHYLAMINE
9002-86-2	POLYVINYL CHLORIDE LATEX
9002-88-4	POLYETHYLENE
9002-89-5	POLYVINYL ALCOHOL
9003-07-0	PROPENE POLYMERS
9003-54-7	ACRYLONITRILE POLYMER WITH STYRENE

PB85-245298/XAB
Industrial Process Profiles for Environmental Use. Chapter 10a. The Plastics and Resins Processing Industry
EPA, Cincinnati, OH, WERL
Radian Corp.
Jul 85, 431p, EPA-600/2-85-086, PC A19/MF A01

Abstract: The report contains a detailed analysis of the plastics and resins processing industry, which includes operations that convert polymers and resins into consumer products. Analytical elements include industry definition, raw material, products, manufacturers, environmental impacts and occupation health impacts. For the purpose of the analysis, the Plastics and Resins Processing Industry has been divided into eleven (11) segments, some of which are comprised of a number of different processes: calendaring, casting, coating, compounding, extrusion, finishing, foam (expandable bead, extruded thermoplastic, multicomponent thermoset, and structural), laminating, molding (blow, compression, injection, reaction injection, rotational and transfer), reinforced plastics and thermoforming.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB85-245645/REB
Evaluation of Polyurethane Foam Cartridges for Measurement of Polynuclear Aromatic Hydrocarbons in Air.
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, W.E. Bresler, and S.W. Hannan
Aug 85, 37p, EPA-600/4-85-055, PC A03/MF A01

Abstract: The objective of this project was to evaluate polyurethane foam (PUF) cartridges as collection media for quantification of vapor phase polynuclear aromatic hydrocarbons (PAHs) in air. Two cleanup methods for PUF cartridges--compression rinsing and combined compression rinsing and Soxhlet extraction--have been evaluated. Two procedures for extraction of PAHs from the PUF matrix, Soxhlet extraction and compression rinsing, were compared. These sample extracts were analyzed by on-column injection, electron impact gas chromatography/mass spectrometry (El GC/MS) to determine PAHs.

AM	AMBIENT MONITORING
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB85-245645/XAB
Evaluation of Polyurethane Foam Cartridges for Measurement of Polynuclear Aromatic Hydrocarbons in Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, W.E. Bresler, S.W. Hannan
Aug 85, 37p, EPA-600/4-85-055, PC A03/MF A01

Abstract: This project evaluated polyurethane foam (PUF) cartridges as collection media for quantification of vapor phase polynuclear aromatic hydrocarbons (PAHs) in air. Two cleanup methods for PUF cartridges--compression rinsing and combined compression rinsing and Soxhlet extraction--have been evaluated, and successfully remove interfering material and background PAHs from the PUF. The compression rinsing method is recommended because it is easier, faster, and cheaper. Two procedures for extraction of PAHs from the PUF matrix, Soxhlet extraction and compression rinsing, were compared. These sample extracts were analyzed by on-column injection, electron impact gas chromatography/mass spectrometry (EI GC/MS) to determine PAHs. The results showed that compression rinsing is comparable to conventional Soxhlet extraction, and that both methods successfully remove PAHs from the PUF cartridges. The stability study was carried out to determine the stability of PAHs adsorbed on PUF cartridges as a function of storage time between collection and extraction. The results indicated that the levels of the spiked perdeuterated benzo(a)pyrene decreased significantly during storage. The rate of decrease was much faster when the PUF cartridges were stored in light. Other PAH levels were not adversely influenced by the storage time.

AM	AMBIENT MONITORING
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB85-246692/REB
Comprehensive Indoor Air Quality Research Strategy, January 1, 1985
EPA, Washington DC, OADEMQA
Interagency Committee on Indoor Air Quality
M.J. Dellarco
Jun 85, 34p, EPA-600/9-85-021, PC A03/MF A01

Abstract: In the Department of Housing and Urban Development-Independent Agencies 1984 House Appropriation Report, EPA was directed to expand indoor air research planning into a long-term comprehensive strategy. The aims of this research strategy are to improve the understanding about the risks to indoor air pollutant exposure and to provide technical information and guidance to the public and private sector cost-effectively. These aims will be achieved by completing the following six tasks: identifying indoor air pollutant sources and factors affecting human exposure; characterizing indoor air quality; determining the relationship between energy conservation and indoor air quality; determining the health effects to indoor air pollution; determining optimal control and mitigation techniques; and developing and conducting a national multipollutant field survey. For each of these tasks the status of current Federal research and future research needs are described. An appendix of case studies describes how individual agencies are working together on indoor air quality research.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB85-246999/REB
Asbestos-Containing Materials in School Buildings: Bulk Sample Analysis Quality Assurance Program-Bulk Sample Rounds 9, 10, 11 and Blind Round 2
EPA, Research Triangle Park, NC, EMSL
Research Triangle Inst.
D.A. Pasquini, M.L. Parris, and L.T. Laird
Jul 85, 90p, EPA-600/4-85-047, PC A05/MF A01

Abstract: The report presents the results of laboratories participating in the ninth, tenth, eleventh and second blind round(s) of the bulk sample analysis quality assurance program sponsored by the U.S. Environmental Protection Agency. Two hundred fifty-four, 320, 318, and 50 laboratories which analyze bulk samples for determination of asbestos content by polarized light microscopy participated in these rounds, respectively. Laboratories received bulk samples of asbestos, asbestos substitutes or other bulk insulation materials. Three aspects of analytical results are considered: classification of a sample as either asbestos (positive) or nonasbestos (negative); identification of the specific type of asbestos present; and quantitation of the relative amount of major constituents present. A performance rating was made for each laboratory, based only on the ability to correctly classify samples.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB85-247005/REB
Preliminary Evaluation of a Modified NBS PM(10) Sampler for Indoor Particulate Measurements
EPA, Research Triangle Park, NC, EMSL
Environmental Monitoring and Services, Inc.
J.E. Howes
Aug 85, 40p, EPA-600/4-85-057, PC A03/MF A01

Abstract: Modifications have been made in the prototype NBS portable sampler to overcome several design flaws. The modifications included replacement of the case, redesign of the filter holder, and addition of a motor control circuit. Results obtained in a brief performance evaluation indicate that the modified sampler yields PM10 data comparable to that obtained with a conventional ambient-type dichotomous sampler. The battery pack (six 1.25V Ni-Cd D cells) used with the modified NBS sampler provides at least 24 hours of operation at a flow rate of 6 lpm. The constant current motor control circuit added to the sampler provides a very uniform flow rate (within + or - 5%) over a 24-hour sampling period. The circuit also automatically decouples the motor when the battery output drops below a voltage that delivers a flow rate of 6 lpm. The performance of an indoor air sampler developed by Harvard University was also evaluated in this study.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB85-248383/XAB
Health Assessment Document for Nickel
EPA, Research Triangle Park, NC, ECAO
S. Bayard, et al.
Sep 85, 433p, EPA-600/8-83-012F, PC A19/MF A01

Abstract: Nickel is found in nature as a component of silicate, sulfide, or arenide ores. Uses for nickel and its compounds include nickel alloys, electroplating baths, batteries, textile dyes and mordants, and catalysts. The predominant forms of nickel in the atmosphere are nickel oxides and complex oxides of nickel. Nickel is also found in water and soil as a result of both natural and anthropogenic sources. Routes of nickel intake for man and animals ar inhalation, ingestion and percutaneous absorption. The pulmonary absorption of nickel compounds varies according to chemical and physical form, with insoluble compounds generally being cleared more slowly. Gastrointestinal intake by man is high ranging from 300 to 500 micrograms daily; however, absorption is low, averaging one to ten percent of intake. Percutaneous absorption of nickel often occurs through contact with nickel-containing commodities used in food preparation; such contact is related to hypersensitivity and skin disorders. Absorbed nickel is carried by the blood and distributed to various tissues depending on route of intake. Inhaled nickel compounds lead to highest levels in lung, brain, kidney and liver. In humans, age-dependent accumulation appears to occur only in the lung.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
10	METAL MINING
106	FERROALLOY ORES, EXCEPT VANADIUM
1061	FERROALLOY ORES, EXCEPT VANADIUM
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3339	PRIMARY NONFERROUS METALS, NEC
334	SECONDARY NONFERROUS METALS
3341	SECONDARY NONFERROUS METALS
335	NONFERROUS ROLLING AND DRAWING
3356	NONFERROUS ROLLING AND DRAWING, NEC
7440-02-0	NICKEL POWDER

PB85-248441/REB
Improved Mobile Source Exposure Estimation
EPA, Ann Arbor, MI, OMS Southwest Research Inst. M.N. Ingalls Mar 85, 212p, EPA-460/3-85-002, PC A10/MF A01

Abstract: The project was conducted to provide an improved estimate of nation-wide annual person hours of exposure to non-reactive mobile source pollutants. National population estimates by hour of the day were developed using the population activity files for six neighborhood types from the EPA NAAQS Exposure Model (NEM) for CO, with the addition of three mobile source microenvironments (street canyons, tunnels and parking garages). The NEM neighborhood populations together with the mobile source microenvironment populations constitute a complete hour-by-hour assignment of the nationwide population to a set of location types. Mobile source pollutant concentrations for the six NEM neighborhoods were derived from 1981 CO monitor data contained in the EPA SAROAD data base. Mobile source pollutant concentrations for the three mobile source microenvironments were derived for data in the literature. A computer program was written to combine the population and pollutant concentration distributions by hour of the day to produce an annual person hours of exposure distribution of mobile source pollutants. If the mobile source emission rate of a pollutant is known, the information in the report can be used to determine the person hours of exposure to various concentrations of that pollutant.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
630-08-0	CARBON MONOXIDE

PB85-248987/XAB
Products of Thermal Degradation of Dielectric Fluids
EPA, Washington, DC, OTS
Midwest Research Institute
S.E. Swanson, M.D. Erickson, L. Moody
May 85, 32p, EPA-560/5-85-022, PC A03/MF A01

Abstract: The report describes the results of a series of experiments which were conducted to augment the data presented in a previous report (PB85-138535/REB, EPA-560/5-84-009). The work presented here includes both repeat runs of those previously reported and also investigations of materials not previously tested. The results of the repeat runs correlate well with the previously reported results. The formation of PCDFs and PCDDs from the PCB-spiked mineral oil, as well as the calculated destruction efficiencies for PCBs, closely match the previously reported results. The repeat chlorobenzene runs show higher levels of PCDF and PCDD formation than previous runs. However, several concentrations in the previous report are 'greater than' values; hence, comparison is difficult. Significant amounts of PCDFs and PCDDs were formed from the tetrachloroethylene fluid. The two high temperature hydrocarcon fluids did not produce PCDFs or PCDDs. It appears that, under these thermal destruction conditions, the extent of PCDF formation varies among dielectric fluids by several orders of magnitude.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
127-18-4	TETRACHLOROETHYLENE
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB85-249258/REB
Evaluation of Trace Organic Emissions from Refuse Thermal Processing Facilities
EPA, Washington, DC, OSW
G.M. Higgins
Jul 82, 152p, PC A08/MF A01

Abstract: The report presents the results of testing, sampling and analysis of three resource recovery facilities burning municipal wastes for emissions of tetra chlorinated dioxins and furans in the flue gas. The stack emissions were analyzed by the EPA PTMAX dispersion model to determine maximum 1-hour ground level concentrations. A wide distribution of isomers were reported both for TCDDs and TCDFs. The most toxic 2378 TCDD isomer emissions from the stack ranged from 3.4 to 180 mg per ton of the fuel fired, while 2378 TCDFs ranged from 22 to 1800 micrograms/ton.

CL-DIOXIN	DIOXINS
CL-ORGANIC	ORGANIC COMPOUNDS
DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4959	SANITARY SERVICES, NEC

PB85-249696/XAB
Health Assessment Document for Trichloroethylene
EPA, Washington, DC, OHEA
L.D. Anderson, et al.
Jul 85, 378p, EPA-600/8-82-006F, PC A17/MF A01

Abstract: Trichloroethylene (TCI) is a solvent widely used in the industrial degreasing of metals. It has been detected in the ambient air of a variety of urban and nonurban areas of the United States and in natural and municipal waters. The weight of available evidence obtained from both animal and human data suggests that long-term exposure to environmental levels of TCI poses no serious health concern to the general population. No teratogenic potential has been demonstrated for TCI in studies conducted to date with experimental animals. With respect to the mutagenic potential of TCI, the data on pure TCI do not allow a conclusion to be drawn. If TCI is mutagenic, the available data suggest it would be a very weak, indirect mutagen. Based on available animal data, there is sufficient animal evidence for carcinogenicity. Based on the Agency's Proposed Guidelines for Carcinogen Assessment, the overall evidence for TCI would result in a classification of B2, i.e., a probable human carcinogen.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
79-01-6	TRICHLOROETHYLENE

PB85-249704/XAB
Health Assessment Document for Tetrachloroethylene (Perchloroethylene)
EPA, Washington, DC, OHEA
V. Benignus, et al.
Jul 85, 268p, EPA-600/8-82-005F, PC A12/MF A01

Abstract: Tetrachloroethylene (PCE) is a volatile solvent with important commercial applications. It has been detected in the ambien air of a variety of urban and nonurban areas of the United States. It has less frequently been detected in water but has been monitored generally at levels of 1 ppb or less. The lowest-observed-adverse-effect-level, based on central nervous system dysfunction, is about 100 ppm. Toxicity testing in experimental animals, coupled with limited human data, suggests that long term exposure of humans to ambient levels of PCE is not likely to represent a health concern. At the current time, the teratogenic potential of PCE for humans is unknown; the mammalian animal tests performed to date do not indicate any significant teratogenic potential. Although PCE epoxide has been found to be positive with respect to mutagenicity in bacterial systems, the data on pure PCE suggest that if it is mutagenic, it is a weak mutagen. PCE has been demonstrated to induce malignant tumors of the liver in mice.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
127-18-4	TETRACHLOROETHYLENE
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC

PB85-249787/XAB
Review of New Source Performance Standards for Sulfuric Acid Plants
EPA, Research Triangle Park, NC, OHEA
Mar 85, 98p, EPA-450/3-85-012, PC A05/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7446-09-5	SULFUR DIOXIDE
7664-93-9	SULFURIC ACID

PB86-100476/XAB
Portland Cement Plants: Background Information for Proposed Revision to Standards
EPA, Research Triangle Park, NC, OHEA
May 85, 125p, EPA-450/3-85-003A, PC A06/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC

PB86-100559/XAB
Evaluation of the Efficiency of Industrial Flares: Flare Head Design and Gas Composition
EPA, Research Triangle Park, NC, AEERL
Energy and Environmental Research Corp.
J.H. Pohl, N.R. Soelberg
Sep 85, 140p, EPA-600/2-85-106, PC A07/MF A01

Abstract: The report gives continued Phase 4 results of a research program to quantify emissions from, and efficiencies of, industrial flares. Initial results were limited to tests conducted burning propane/nitrogen mixtures in pipe flares without pilot light stabilization. The work reported here extends the previous results to other flare head designs and other gases and includes a limited investigation of the influence of pilot flames on flare performance. Results included: (1) flare head design influences the flame stabilit curve; (2) combustion efficiency can be correlated with flame stabilit curve for pressure heads and coanda steam injection heads; (3) efficiency of air-assisted heads correlated with the momentum ratio of air to fuel (the heating value of the gas had only minor influence), (4) limited data on an air-assisted flare show that a pilot light improves flame stability, (5) the destruction efficiency of compounds depends on the structure of the compounds, and (6) for compounds tested in this program, the destruction efficiency of different compounds could be correlated with the flame stability curve for each.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
289	MISCELLANEOUS CHEMICAL PRODUCTS
2899	CHEMICAL PREPARATIONS, NEC

PB86-100641/XAB
Health Assessment Document for Vinylidene Chloride
EPA, Research Triangle Park, NC, ECAO
Syracuse Research Corp.
D.K. Basu, et al.
Aug 85, 310p, EPA-600/8-83-031F, PC A14/MF A01

Abstract: Vinylidene chloride is a highly reactive, flammable, clear colorless liquid. In the absence of chemical inhibitors, it can produce violently explosive, complex peroxides. The estimated ambient air level of vinylidene chloride in urban-suburban areas of the United States is 20 micrograms/cu m. The median concentration (14 micrograms/cu m) for ambient air at point sources of emission is substantially higher. Following oral or inhalation exposure, mammals readily absorb vinylidene chloride. Metabolites of vinylidene chloride, formed in the liver, produce toxic lesions in the liver and kidneys, with inhibitors of metabolism providing protection from vinylidene chloride toxicity. The acute hepatotoxicity of vinylidene chloride is greater than that of any other chloroethylene. Based on the overall evidence, VDC would be a Group 3 chemical according to the IARC (International Agency for Research on Cancer's) approach; and by definition, a Group 3 chemical cannot be classified according to its carcinogenicity to humans. However, the mutagenic activity of VDC, its chemical structure, its activity as a tumor initiator in mouse skin, and the ability of its metabolites to react with DNA raise concern that the total body of evidence should not be lightly dismissed.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
75-35-4	DICHLOROETHYLENE,1,1-

PB86-100674/REB
Health Risk Assessment Approach for 2,3,7,8-Tetrachlorodibenzo--p-Dioxin
EPA, Cincinnati, OH, ECAO
D. Mukerjee, C.H. Ris, and J. Schaum
Jun 85, 80p, EPA-600/8-85-013, PC A05/MF A01

Abstract: 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is one of the most toxic and environmentally stable pollutants. In addition to various toxic effects, TCDD has been found to cause teratogenic, fetocidal, reproductive and carcinogenic effects in animals. In humans it adversely affects various organ systems and is probably carcinogenic as well. The report documents the methodologies utilized by the United States Environmental Protection Agency in its development of health risk assessment from exposure to TCDD.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RA	RISK ASSESSMENT
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB86-102282/REB
Refueling Emissions from Uncontrolled Vehicles
EPA, Ann Arbor, MI, SDSB
D. Rothman, and R. Johnson
Aug 85, 75p, EPA-AA/SDSB-85-6, PC A04/MF A01

Abstract: The Environmental Protection Agency is currently in the process of developing and evaluating a Federal test procedure for the measurement of vehicle refueling emissions. Refueling emissions are of direct concern due to their benzene content and the potential health effects of exposure to gasoline vapors in general. Also, they contribute to ozone formation, and are of particular concern in areas which currently do not meet the National Ambient Air Quality Standards (NAAQS) for ozone. This report describes EPA's baseline program to measure refueling emissions from uncontrolled vehicles, and to investigate the sensitivity of these emissions to various parameters. An emission factor equation based upon the various parameters will be developed that will be used in making comparisons with the results of other refueling emissions studies. It will then be used to estimate emission factors under a range of conditions.

AM	AMBIENT MONITORING
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
10028-15-6	OZONE
41	LOCAL AND INTERURBAN PASSENGER TRANSIT
71-43-2	BENZENE

PB86-102597/XAB
Health Assessment Document for Ethylene Oxide
EPA, Washington, DC, OHEA
D.A. Gray, et al.
Jun 85, 304p, EPA-600/8-84-009F, PC A14/MF A01

Abstract: Ethylene oxide is used as an intermediate in the synthesis of ethylene glycol. Small amounts of this epoxide are used as a sterilant or pesticide in commodities, pharmaceuticals, medical devices, tobacco, and other items, representing a considerable potential for human exposure. The pharmacokinetics of ethylene oxide have not been studied extensively. While only limited studies found in the literature concerned the absorption of this chemical, toxicity data suggest that absorption occurs via the respiratory and gastrointestinal tracts. Acute exposure to ethylene oxide in humans results in symptoms of headache, vomiting, dyspnea, and diarrhea. Subacute and chronic effects are not well documented. Data indicated many different types of genetic damage may be induced following exposure to ethylene oxide. It was mutagenic in the Ames Salmonella assay to Bacillus subtilis and to Drosophila melanogaster, as well as in cultured mammalian cell and assay systems. The alkylating and mutagenic properties of ethylene oxide cause concern about its potential carcinogenicity. Though there are no definitive, epidemiologic studies, the data are consistent with the animal data in that there seems to be a strong association between an increased risk of cancer, especially leukemia, and prolonged inhalation exposure to ethylene oxide.

CL-PEST	PESTICIDES
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
21	TOBACCO MANUFACTURES
211	CIGARETTES
212	CIGARS
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2834	PHARMACEUTICAL PREPARATIONS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
38	INSTRUMENTS AND RELATED PRODUCTS
384	MEDICAL INSTRUMENTS AND SUPPLIES
51	WHOLESALE TRADE-NONDURABLE GOODS
519	MISC. NONDURABLE GOODS
5194	TOBACCO AND TOBACCO PRODUCTS
75-21-8	ETHYLENE OXIDE

PB86-103041/XAB
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 2. Design for National Survey of Emission of Specific Compounds for Coal Fired Utility Boiler Plants
EPA, Washington, DC, OTS
Midwest Research Institute
R.M. Lucas, D.K. Melroy
Aug 85, 64p, EPA-560/5-83-005, PC A04/MF A01

Abstract: The emission of several toxic compounds in the polycyclic organic group has been reported from stationary combustion processes. The potential exists for the formation of these compounds as the results of combustion of coal-refuse, wood, municipal refuse, waste oil, and coal. A pilot study was designed to ascertain the number of combustion sites and the number of days of sampling required at each site to estimate the level and prevalence of these toxic substances in the emissions from combustion processes and to do so at a minimum cost. For each facility a complex, multimedia sampling design was developed for the collection of solid, liquid, and gaseous influents and effluents. In addition, measurements of process parameters were also taken. This design allowed for the estimation of the inputs into the process, the efficiency of the combustion process, and the emissions from the process. Using the estimates of the variability of the resulting data and cost estimates based on the experience gained in the pilot, a national survey design was developed. Sampling is planned for seven coal and nine refuse combustion facilities for 5 days each.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB86-103058/XAB
Comprehensive Assessment of the Specific Compounds Present in Combustion Processes. Volume 4. National Estimates of Emission of Specific Compounds from Coal Fired Utility Boiler Plants
EPA, Washington, DC, OTS
Midwest Research Institute
R.M. Lucas, G.W. Kircher
Aug 85, 31p, EPA-560/5-83-007, PC A03/MF A01

Abstract: Specimens were acquired from influents and effluents from seven coal-fired utility boilers. The specimens were chemically analyzed for toxic compounds in the polycyclic organic matter group. The specific target compounds were polychlorinated dibenzo(p)-dioxins (PCDDs), dibenzofurans (PCDFs), biphenyls (PCBs), selected polynuclear aromatic hydrocarbons (PAHs) and selected phthalates. Twelve PAH compounds and six phthalate compounds were included among the targette compounds. Naphthalene was the most prevalent PAH compound detected. It was found in the flue gas emissions from all seven facilities. Other PAHs were also detected in the coal at all seven facilities but were only rarely detected in the other media. No PCDDs or PCDFs were detected in any of the acquired specimens. PCBs were only detected in one other media, the influent combustion air.

CL-POM	POLYCYCLIC ORGANIC MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
49	ELECTRIC, GAS, AND SANITARY SERVICES
491	ELECTRIC SERVICES
4911	ELECTRIC SERVICES
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB86-105004/XAB
Health Assessment Document for Chloroform
EPA, Washington, DC, OHEA
Aug 85, 415p, EPA-600/8-84-004F, PC A18/MF A01

Abstract: Chloroform is ubiquitous in the environment. The northern hemisphere background average has been determined to be approximately 14 ppt and the global average is 8 ppt. After inhalation or ingestion, highest concentrations are found in tissues with high lipid content. Chloroform has been detected in fetal liver. Chloroform would be expected to appear in human milk, because it has been found in cow's milk, cheese, and butter. Subchronic and chronic toxicity experiments with rats, mice, and dogs did not clearly establish a no-effect exposure level for systemic toxicity. Chloroform appears to have teratogenic potential when inhaled. Delayed fetal development occurred at an exposure level (30 ppm) that produced minimal maternal effects. The majority of the assays for mutagenicity and genotoxicity have yielded negative results; however, many of these results are inconclusive because of various inadequacies in the experimental protocols used.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
67-66-3	CHLOROFORM

PB86-105913/XAB
Current Intelligence Bulletin 44, Dinitrotoluenes (DNT)
National Institute of Occupational Safety and Health
Jul 85, 26p, PC A03/MF A01
NIOSH PUB NO. 85-109, Unavail NIOSH

Abstract: Rats which over a 1-year period ingested diets containing a technical grade mixture of dinitrotoluenes (TDNT), primarily composed of the 2,4- and the 2,6-isomers, or which were fed only 2,6-dinitrotoluene (2,6-DNT) developed cancers of the liver. The liver cancers consisted of hepatolcellular carcinomas and in some cases chloangiocarcinomas. Feeding or oral administration of TDNT or 2,6-DNT for up to 2 years induced decreased spermatogenesis, aspermatogenesis, or testicular atrophy in dogs, rats, or mice. Nonfunctioning ovaries were found in mice fed TDNT for 2 years. Based on these data, the National Institute of Occupational Safety and Health (NIOSH) recommends that TDNT and 2,6-DNT be regarded as potential human carcinogens in the workplace and possible inducers of adverse reproductive effects.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
121-14-2	DINITROTOLUENE,2,4-
606-20-2	DINITROTOLUENE,2,6-

PB86-107042/XAB
Methods for Assessing Exposure to Chemical Substances. Volume 4: Methods for Enumerating and Characterizing Populations Exposed to Chemical Substances
EPA, Washington, DC, OPTS
Versar, Inc.
D.A. Dixon, et al.
Jul 85, 298p, EPA-560/5-85-004, PC A13/MF A01

Abstract: The report, one of a series of reports concerning exposure assessment, describes methods for estimating the sizes of populations potentially exposed to chemical substances. Five categories of exposed populations are covered: (1) populations exposed to chemicals in the ambient environment, (2) workers, (3) populations exposed through ingestion of chemicals in food, (4) users of consumer products, and (5) populations exposed through ingesting chemicals in drinking water. The report contains general data on populations from governmental agencies such as the U.S. Bureau of Census, U.S. Department of Labor, U.S. Department of Agriculture, and EPA's Office of Drinking Water. It also contains step-by-step methods for locating and using data to enumerate each subpopulation identified as potentially exposed to toxic chemicals. Appendix A contains sample calculations illustrating the methods presented in the text. Appendix B is OSHA's Industry-Occupation (I-O) Matrix, described in Section 3 of the report.

EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB86-107059/XAB
Methods for Assessing Exposure to Chemical Substances, Volume 3. Methods for Assessing Exposure from Disposal of Chemical Substances
EPA, Washington, DC, OPTS
Versar, Inc.
L.C. Adkins, et al.
Jul 85, 393p, EPA-560/5-85-003, PC A17/MF A01

Abstract: The report, which is part of a series of volumes on exposure assessment, presents methods for estimating environmental releases of chemical substances from disposal sites. These release estimates must be used in conjunction with procedures given in Volume 2 (ambient exposure category) and Volume 5 (drinking water exposure category) in order to complete the exposure assessment. A five-stage methodological framework outlines the major steps that must be taken in order to estimate releases from disposal by landfilling, land treatment, surface impoundment, municipal wastewater treatment, incineration, and deep-well injection. The methods are applicable to chemical substances in all of the following waste categories: municipal solid waste, industrial solid waste (hazardous and nonhazardous), municipal wastewater, wastewater treatment sludges, and incinerator residues. The report provides guidance on information resources useful in completing each step and also discusses data gaps and limitations in predictive capability. Sample data and summaries of information resources are included in appendices.

CL-HAZWAST HAZARDOUS WASTES
EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE
49 ELECTRIC, GAS, AND SANITARY SERVICES
494 WATER SUPPLY
495 SANITARY SERVICES

PB86-107067/XAB
Methods for Assessing Exposure to Chemical Substances, Volume 2. Methods for Assessing Exposure to Chemical Substances in the Ambient Environment
EPA, Washington, DC, OPTS
Versar, Inc.
J.R. Freed, et al.
Jul 85, 419 p, EPA-560/5-85-002, PC A18/MF A01

Abstract: The document is the second in a series of volumes developed to assist in the assessment of exposure to chemical substances. This report presents methods that can be used to estimate exposure to chemical substances in the ambient environment and includes many tools, data sources, and models that are useful in the exposure estimation procedures. The volume is organized to reflect the flow of information in an ambient exposure assessment. Sections 2 and 3 provide information on the preliminary data required, i.e., production volume, physicochemical properties, and uses of the chemical substance. Section 4 contains a description of the availability and use of monitoring data bases and how monitoring data are integrated in the overall methods. Section 5 indicates how the population methods (Volume 4) fit into the overall process. Section 6 is the core of this volume; it addresses the analytical framework for calculating exposure and discusses how to access appropriate data for each of the analytical elements. To supplement the text, an Information Resource Matrix which indexes data bases and other resources is included as Appendix A; a list of chemicals studied and regulated by federal agencies as of 1984 is provided as Appendix B; and examples of pertinent data base outputs are given in Appendix C.

CL-HAZWAST HAZARDOUS WASTES
EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB86-107083/XAB
Methods For Assessing Exposure to Chemical Substances. Volume 1. Introduction
EPA, Washington, DC, OPTS
Versar, Inc.
M.A. Callahan, et al.
Jul 85, 103p, EPA-560/5-85-001, PC A06/MF A01

Abstract: The document is the first in a series of volumes developed for the U.S. Environmental Protection Agency, Office of Toxic Substances, to assist in the assessment of exposure to chemical substances. This introductory volume discusses issues of general interest in all exposure assessments, including a discussion on planning an assessment, and summarizes the contents of the next eight volumes. Planning an exposure assessment is a function of the purpose, scope, depth, and approach of the assessment. The report presents a list of questions that, when answered, aid the assessor in determining the resources and tools needed to do the assessment. The organization of an exposure assessment is discussed, and a basic outline that can be used is provided. The content of major sections in an exposure assessment are discussed: General Information, Sources, Exposure Pathways and Environmental Fate, Monitoring or Estimated Concentrations, Exposed Populations, and the Integrated Exposure Analysis. An overview of exposure assessments in different settings is presented. Different types of assessments (screening level, intermediate level, detailed, and special assessments) are described.

CL-HAZWAST HAZARDOUS WASTES
EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB86-107604/XAB
Survey of Methylene Chloride Emission Sources
EPA, Research Triangle Park, NC, OHEA
June 85, 176p, EPA-450/3-85-015, PC A09/MF A01

Abstract: The potential health impact of methylene chloride emissions is being investigated. The document contains information on the sources of methylene chloride emissions, current emission levels, control methods that could be used to reduce methylene chloride emissions, and cost estimates for employing controls.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
20	FOOD AND KINDRED PRODUCTS
209	MISC. FOODS AND KINDRED PRODUCTS
2095	ROASTED COFFEE
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
2822	SYNTHETIC RUBBER
30	RUBBER AND MISC. PLASTICS PRODUCTS
301	TIRES AND INNER TUBES
3011	TIRES AND INNER TUBES
75-09-2	METHYLENE CHLORIDE

PB86-107943/XAB
Survey of Trichloroethylene Emission Sources
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
R.F. Pandullo, et al.
Jul 85, 133p, EPA-450/3-85-021, PC A07/MF A01

Abstract: The potential health impact of trichloroethylene emissions is being investigated. This document contains information on the sources of trichloroethylene emissions, current emission levels, control methods that could be used to reduce trichloroethylene emissions, and cost estimates for employing controls.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
79-01-6	TRICHLOROETHYLENE

PB86-109097/XAB
Analytical Method: The Analysis of By-Product Chlorinated Biphenyls in Air. Revision 2
EPA, Washington, DC, OPTS
Midwest Research Institute
M.B. Erickson
May 85, 66p, EPA-560/5-85-011, PC A04/MF A01

Abstract: This is a gas chromatographic/electron impact mass spectrometric (GC/EIMS) method applicable to the determination of chlorinated biphenyls (PCBs) in air emitted from commercial production through stacks, as fugitive emissions, or static (room, other containers, or outside) air. The PCBs present may originate either as synthetic by-products or as contaminants derived from commercial PCB products (e.g., Aroclors), and may be present as single isomers or complex mixtures, and may include all 209 congeners from monochlorobiphenyl through decachlorobiphenyl. A variety of general and specific sample preparation options are presented in this method. In this method PCBs are detected and quantitated by homolog group. The results can be summed to give a total PCB value comparable to results generated by other methods or they may be presented as 10 individual homolog values. This homolog distribution can provide additional quantitative information on the composition and source of the PCBs. The method performance is assessed for each sample. A set of four (sup 13)C-labeled PCBs is employed as recovery surrogates. If the surrogates are recovered and other QC parameters are within acceptable limits, then the data may be considered valid.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
11097-69-1	AROCLOR 1254
1336-36-3	POLYCHLORINATED BIPHENYLS
53469-21-9	POLYCHLORINATED BIPHENYL (AROCLOR 1242)

PB86-110921/XAB
Assessment of Organic Contaminants in Emissions from Refuse-Derived Fuel Combustion
EPA, Cincinnati, OH, HWERL
Energy Resources Co., Inc.
J. Chrostowski, et al.
Sep 85, 153p, EPA-600/2-85-115, PC A08/MF A01

Abstract: Organic contaminants in emissions from refuse-derived fuel combustion were investigated in a 20-inch-diameter atmospheric fluidized-bed combustor. Combinations of coal/EcoFuel/MSW/toluene were burned in the combustor with temperatures ranging from 1250 to 1550 degrees F. A Source Assessment Sampling System (SASS) was used to sample the stack gas; Level 1 methodology was used to analyze the organic contaminant levels. Combustion efficiencies of 93 to 98 percent were achieved in the test burns. Combustion of the EcoFuel generated fewer organic emissions than combustion of coal at similar combustion temperatures. The fine particulate collected by the SASS train filter contained higher concentrations of extractable organics than the reactor fly ash and the SASS cyclone samples. Combustion of a toluene/EcoFuel mix generated a large number of benzene derivatives not seen in the combustion of pure EcoFuel. Polycyclic aromatic hydrocarbons were the dominant organic compounds contained in the XAD-2 resin extract from coal combustion. A number of different priority pollutants were identified in the samples collected.

CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT
49 ELECTRIC, GAS, AND SANITARY SERVICES
495 SANITARY SERVICES
4953 REFUSE SYSTEMS

PB86-113404/REB
Alternative Methods for Toxicity Testing: Regulatory Policy Issues
EPA, Washington, DC, OPE
S.M. Lyons, M.A. Champ, and S. Panem
Apr 85, 91p, EPA-230/12-85-029, PC A05/MF A01

Abstract: The study surveys attitudes and policies of representative organizations concerning the issue of alternatives to animal testing. Positions of organizations in the scientific community, the regulatory community, industry, and the animal welfare community are examined within the context of growing pressures to adopt new toxicity testing methodologies. The resulting issues which effect regulatory development are identified. The report has also been prepared as an information resource and guide to the relevant technical literature. Regulatory policy issues concerning the use of alternative toxicity tests are identified and discussed in the report.

EPA ENVIRONMENTAL PROTECTION AGENCY
TT TOXICITY TESTING

PB86-116522/REB
Guidance for Controlling Asbestos-Containing Materials in Buildings: 1986 Edition
EPA, Washington, DC, OPTS
Battelle Columbus Labs.
Jun 85, 112p, EPA-560/5-85-024, PC A06/MF A01

Abstract: The revised document provides EPA guidance on controlling asbestos-containing materials found in buildings. The document (1) provides a current summary of data on exposure to airborne asbestos, (2) survey procedures for determining if asbestos-containing material is present in buildings, (3) explains how to establish a special operations and maintenance program in a building found to contain asbestos, (4) review technical issues confronted when assessing the potential for exposure to airborne asbestos, in particular indoor settings, (5) suggests a structured process for selecting a particular course of action given information on physical condition of the asbestos, exposure levels, assessment methods, and abatement techniques, (6) summarizes and updates information on applicability, effectiveness, and relative costs of alternative remedial actions, (7) introduces and discusses criteria for determining successful asbestos control.

CT	CONTROL TECHNOLOGY DOCUMENT
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB86-117587/XAB
Locating and Estimating Air Emissions from Sources of Manganese
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 119p, EPA-450/4-85-007H, PC A06/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with manganese. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of manganese and in making gross estimates of air emissions therefrom. This document presents information on 1) the types of sources that may emit manganese; 2) process variations and release points that may be expected within these sources; and 3) available emissions information indicating the potential for manganese release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
286	INDUSTRIAL ORGANIC CHEMICALS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
7439-96-5	MANGANESE

PB86-117595/XAB
Locating and Estimating Air Emissions from Sources of Phosgene
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 61p, EPA-450/4-84-007I, PC A04/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with phosgene. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of phosgene in making gross estimates of air emissions therefrom. This document presents information on (1) the types of sources that may emit phosgene, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for phosgene release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
75-44-5	PHOSGENE

PB86-117603/XAB
Locating and Estimating Air Emissions from Sources of Epichlorohydrin
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 63p, EPA-450/4-85-007J, PC A04/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with epichlorohydrin. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of epichlorohydrin in making gross estimates of air emissions therefrom. This document presents information on 1) the types of sources that may emit epichlorohydrin; 2) process variations and release points that may be expected within these sources; and 3) available emissions information indicating the potential for epichlorohydrin release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
106-89-8	EPICHLOROHYDRIN
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
282	PLASTICS MATERIALS AND SYNTHETICS
2821	PLASTICS MATERIALS AND RESINS
286	INDUSTRIAL ORGANIC CHEMICALS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS

PB86-117611/XAB
Locating and Estimating Air Emissions from Sources of Vinylidene Chloride
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 76p, EPA-450/4-84-007K, PC A05/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. This document deals specifically with vinylidene chloride. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of vinylidene chloride in making gross estimates of air emissions therefrom. The document presents information on (1) the types of sources that may emit vinylidene chloride, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for vinylidene chloride release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
282	PLASTICS MATERIALS AND SYNTHETICS
2824	ORGANIC FIBERS, NONCELLULOSIC
286	INDUSTRIAL ORGANIC CHEMICALS
30	RUBBER AND MISC. PLASTICS PRODUCTS
307	MISCELLANEOUS PLASTICS PRODUCTS
3079	MISCELLANEOUS PLASTICS PRODUCTS
75-35-4	DICHLOROETHYLENE,1,1-

PB86-118221/REB
Alachlor: Special Review Position. Document 1.
EPA, Washington, DC, OTS
Dec 84, 98p, PC A05/MF A01

Abstract: The Office of Pesticide Programs, U.S. Environmental Protection Agency (U.S. EPA) has prepared a Alachlor Position Document. The document presents the bases for the initiation of a Special Review of all pesticide products containing the active ingredient alachlor. The alachlor document is an extensive review of the following topics: Regulatory and legal background of alachlor, Qualitative risk assessment, including metabolic and pharmacokinetic, properties, short term tests, oncogenicity and human studies, exposure assessment, dietary risks and applicator risks, and benefits summary.

CL-PEST	PESTICIDES
EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RA	RISK ASSESSMENT
RR	REGULATIONS OR RULES

PB86-118932/REB
Gas Chromatographic/Fourier Transform Infared Analysis of Trace Organics: Feasibility after Collection on TENAX-GC Sorbent Cartridges
EPA, Research Triangle Park, NC, EMSL
Duke Univ.
R.A. Palmer, J.W. Childers, and M.J. Smith
Oct 85, 61p, EPA-600/4-85-066, PC A04/MF A01

Abstract: The combination of sorbent cartridge thermal desorption with capillary column GC/on-the-fly FTIR has been shown effective for the detection and identification of volatile organics in laboratory-generated mixtures, including the distinction between isomeric species, at the level of a few hundred nanograms per compound per cartridge. Traces of water desorbed from the cartridges must be reduced by the insertion of a dryer unit between the desorption chamber and the GC column. Methods of lowering the detection and identification limits to less than 100 micrograms per compound per cartridge are proposed.

AM	AMBIENT MONITORING
CL-ORGANIC	ORGANIC COMPOUNDS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB86-119583/XAB
SO2 Emissions in Natural Gas Production Industry: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
Sep 85, 141p, EPA-450/3-82-023B

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
7446-09-5	SULFUR DIOXIDE

PB86-120326/XAB
Evaluation of Sampling and Analytical Methodology for Polynuclear Aromatic Compounds in Indoor Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
C.C. Chuang, et al.
Oct 85, 92p, EPA-600/4-85-065, PC A05/MF A01

Abstract: The objective of this project was to develop a generic sampling and analytical methodology to characterize the polynuclear aromatic hydrocarbon (PAH) concentrations in air within various microenvironments. The following three studies were performed: evaluation of analytical methods, design of a sampling method, and design of a pilot study. Two analytical methods, high performance liquid chromatography with ultraviolet adsorption and fluorescence detection and gas chromatography/mass spectrometry, were evaluated for the determination of PAHs and their derivatives in air within microenvironments. The results showed that gas chromatography/positive chemical ionization mass spectrometry with data acquisition in the selected ion monitoring mode is the preferred analytical approach. A modified EPA high volume sampler, consisting of a quartz fiber filter and a polyurethane foam cartridge, is proposed for use in a future experimental study. A literature review was conducted to determine what is known about the contribution of cigarette smoke to the levels of PAHs in air within microenvironments and to evaluate the use of quinoline and isoquinoline as possible marker compounds for the levels of cigarette smoke. A pilot study was designed to assess PAH levels in air found in residences.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING

PB86-120953/XAB
Comparison of Ambient Air Sampling Techniques for Volatile Organic Compounds
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs
M.W. Holdren, B.L. Smith, R.N. Smith
Oct 85, 60p, EPA-600/4-85-067, PC A04/MF A01

Abstract: A series of fourteen experimental sampling runs were carried out at a field site to collect data from several ambient air monitoring methods for volatile organic compounds (VOCs). Ambient air was drawn through a sampling manifold and was continuously spiked with volatile organic compounds to give concentrations 1 to 3 micrograms/L above background air. The spiked compounds were chloroethene, 1,1-dichloroethene, dichloromethane, 3-chloropropene, 1,1,2-trichloro-1,2,2- trifluoroethane, trichloromethane, 1,2-dichloroethane, 1,1,1- trichloroethane, benzene, tetrachloromethane, trichloroethene, toluene, tetrachloroethene, chlorobenzene, and 1,2-dimethylbenzene. Special canisters were utilized to collect whole air, time-integrated samples. An automated gas chromatographic system using capillary column separation and multiple detectors was used for analysis. These samples were analyzed by standard gas chromatographic/mass spectrometric techniques. For Tenax, precision values ranged from 8 to 16 percent.

AM	AMBIENT MONITORING
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-122546/REB
Health Assessment Document for Polychlorinated Dibenzo-p-Dioxins
EPA, Cincinnati, OH, ECAO
D.K. Basu et al.
Sep 85, 612p, EPA-600/8-84-014F, PC A99/MF A01

Abstract: The health assessment document on polychlorinated dibenzo-p-dioxins discusses multimedia environmental issues pertaining to the most toxic chlorinated dioxins, namely, 2,3,7,8-tetrachloro-; 1,2,3,7,8-pentachloro-;1,2,3,6,7,8-hexachloro-; and 1,2,3,7,8,9-hexachlorodibenzo-p-dioxins. Scientifically valid data essential for human health risk assessment purposes from an extensive literature search have been compiled and discussed critically. Discussions are based on physiochemical properties and analytical methodologies; stability and degradation; production, use, synthesis; environmental resources and environmental levels; environmental fate and transport; degradation; bioaccumulation and bioconcentration factors; ecological effects; various aspects of toxic effects from acute, subchronic and chronic exposures in experimental animals and humans; pharmacokinetics and mechanism of toxic effects; teratogenicity and reproductive effects; mutagenicity and cardinogenecity. Based on this review, critical studies have been identified and utilized for estimating the unit risk.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1746-01-6	TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-
19408-74-3	HEXACHLORODIBENZODIOXIN,1,2,3,7,8,9-
34465-46-8	HEXACHLORODIBENZODIOXIN,1,2,3,6,7,8-

PB86-122702/REB
Health Assessment Document for 1,2-Dichloroethane (Ethylene Dichloride)
EPA, Research Triangle Park, NC, ECAO
I.W.F. Davison et al.
Sep 85, 402p, EPA-600/8-84-006F, PC A18/MF A01

Abstract: Ethylene Dichloride (EDC), a clear, colorless volatile liquid, is principally emitted to the environment during manufacturing. Monitoring data, including ambient urban areas, indicate a concentration of equal to or less than 0.5 ppb for most locations. EDC is rapidly absorbed, metabolized, and eliminated. Unmetabolized EDC is eliminated almost exclusively via the lungs. In humans, the symptoms of acute toxicity from repeated exposures exceeding 60 ppm are irritation of the respiratory tract and eyes and CNS depression. According to available evidence EDC does not adversely affect the reproductive or development process in animals except at maternally toxic levels. Positive responses in different text systems indicate that EDC is a weak, direct acting mutagen; however, several of its metabolites, formed in animals, are more potent mutagens than EDC. As a carcinogen, EDC induces tumors in rats and mice by various routes of exposure (gavage, intraperitoneally, dermally). However, lifetime inhalation exposure conditions did not produce tumors in rats or mice. Results from animal carcinogen studies, when considered with the positive evidence of mutagenicity and the presence of reactive metabolites and covalent bonding to DNA, suggest that EDC is a potential human carcinogen.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
107-06-2	ETHYLENE DICHLORIDE

PB86-123551/XAB
Laboratory and Field Evaluation of the Semi-VOST (Semi-Volatile Organic Sampling Train) Method. Volume 1.
EPA, Research Triangle Park, EMSL
Radian Corp.
J. Bursey, et al.
Nov 85, 51p, EPA-600/4-85-075A, PC A04/MF A01

Abstract: An initial laboratory and field evaluation study has been completed which assessed the performance of the Semi-Volatile Organic Sampling Train Method (Semi-VOST) for measuring concentrations of principal organic hazardous constituents (POHCs) with boiling points greater than 100C that are emitted from hazardous waste incinerators. A draft formulation of the methodology was tested through an experimental laboratory program to evaluate method performance characteristics. The program consisted of: (1) determination of minimum compound detection limits; (2) simulation of a flue gas stream to determine the impacts of water vapor, SO2, NOx, and HCl on sampling; and (3) determination of precision and bias for the sample preparation and analytical elements of the method. Results of the simulation study are reported for 12 test compounds (POHCs) representing a range of physical and chemical properties which could affect sample train collection and recovery performance. Three of the test compounds were selected for further investigation to evaluate method precision and bias under field conditions through the use of four simultaneously-operating Semi-VOST trains. Project results are presented in Volume I along with recommendations on elements of the method requiring further research.

CL-SVOC	SEMIVOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB86-123569/XAB
Laboratory and Field Evaluation of the Semi-VOST (Semi-Volatile Organic Sampling Train) Method. Volume 2. Appendices
EPA, Research Triangle Park, EMSL
Radian Corp.
J. Bursey, M. Hartman, J. Homolya, R. McAllister, J. McGaughey
Nov 85, 213p, EPA-600/4-85-075B, PC A10/MF A01

Abstract: An initial laboratory and field evaluation study has been completed which assessed the performance of the Semi-Volatile Organic Sampling Train Method (Semi-VOST) for measuring concentraitons of principal organic hazardous constituents (POHCs) with boiling points greater than 100C that are emitted from hazardous waste incinerators. A draft formulation of the methodology was tested through an experimental laboratory program to evaluate method performance characteristics. The program consisted of: (1) determination of minimum compound detection limits; (2) simulation of a flue gas stream to determine the impacts of water vapor, SO2, NOx, and HCl on sampling; and (3) determination of precision and bias for the sample preparation and analytical elements of the method. Results of the simulation study are reported for 12 test compounds (POHCs) representing a range of physical and chemical properties which could affect sample train collection and recovery performance. Three of the test compounds were selected for further investigation to evaluate method precision and bias under field conditions through the use of four simultaneously-operating Semi-VOST trains. Project results are presented in Volume I along with recommendations on elements of the method requiring further research.

CL-SVOC	SEMIVOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB86-123601/XAB
National Air Toxics Information Clearinghouse (NATICH) Data Base Users Guide for Data Viewing
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
N. Gates, S. Smith
Sep 85, 224p, EPA-450/5-85-008, PC A10/MF A01

Abstract: The National Air Toxics Information Clearinghouse (NATICH) data base is a computerized data base which contains indexed information on toxic and potentially toxic air pollutants. The NATICH data base has been established by the U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, to support state and local programs in the control of non-criteria air pollutants. The data base is intended to facilitate information exchange among state and local agencies and between EPA and state and local agencies and to minimize duplication of effort. The NATICH data base contains two major categories of data: (1) data collected from state and local air pollution control agencies on their air toxics activities, and (2) citations and abstracts to published documents and ongoing research related to toxic air pollutants from EPA and other agencies and organizations.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-123742/XAB
Addendum to the Health Assessment Document for Dichloromethane (Methylene Chloride) Updated Carcinogenicity Assessment of Dichloromethane (Methylene Chloride)
EPA, Washington, DC, OHEA
D.V. Singh, H.L. Spitzer, P.D. White
Sep 85, 124p, EPA-600/8-82-004FF, PC A06/MF A01

Abstract: The addendum contains a review of the data from the latest National Toxicology Program (NTP) inhalation bioassay of dichloromethane (DCM) and an update of the inhalation cancer risk value. In addition, there is a recommendation for an estimate of unit risk for ingestion exposure, and an evaluation of metabolism and pharmacokinetic data for use in the development of cancer unit risk estimates. The recent NTP inhalation bioassay concluded that there was some evidence of carcinogenicity for male F344/N rats and clear evidence of carcinogenicity for female F344/N rats as shown by increased evidence of benign neoplasms of the mammary gland. There was clear evidence of carcinogenicity for male and female B6C3F1 mice as shown by increased incidence of alveolar/bronchiolar neoplasms and of hepatocellular neoplasms. A review of the metabolism/ pharmacokinetics concluded that possible approaches for interpreting the data are more illustrative than useful in risk estimation. Using EPA's Proposed Guidelines for Carcinogen Risk Assessment, there is a sufficient weight-of-evidence that DCM is a possible carcinogen in experimental animals, but for humans the data are inadequate. Therefore, DCM is classified as Category B2, i.e., a possible human carcinogen.

CL-SOLVENT	SOLVENTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
284	SOAP, CLEANERS, AND TOILET GOODS
2842	POLISHES AND SANITATION GOODS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-09-2	METHYLENE CHLORIDE

PB86-124468
Emissions Characterization of a Heavy-Duty Diesel Truck Engine Operated on Crude and Minimally-Processed Shale Oils
EPA, Ann Arbor, MI, OMS
Southwest Research Inst.
T.L. Ullman, and C.T. Hare
Sep 81, 312p, EPA-460/3-81-012, PC A14/MF A01

Abstract: Three crude shale oils were chosen from six candidates to investigate their possible use as substitutes for No. 2 diesel fuel. Satisfactory hot engine operation was achieved on the crudes using a fuel heating system, allowing emissions characterization during transient and steady-state operation. Regulated gaseous emissions changed little with the crudes compared to diesel fuel; but total particulate and soluble organics increased, and larger injector tip deposits and piston crown erosion were observed. After engin rebuild, two minimally-processed shale oils were run without the fuel heating system, causing no engine problems. Most emissions were higher than for No. 2 fuel using an 80 percent distillate of crude shale oil, but lower using a hydrotreated form of the distillate.

CL-ORGANIC	ORGANIC COMPOUNDS
CL-PM	PARTICULATE MATTER
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-124906/REB
Compilation of Air Pollutant Emission Factors. Volume 1.
Stationary Point and Area Sources, Fourth Edition
EPA, Research Triangle Park, NC, Office of Air Quality Planning and Standards
Sep 85, 823p, AP-42, PC A99/MF E04

Abstract: Volume one, of the two volume series, contains emission data obtained from source tests, material balance studies, engineering estimates, etc., which have been compiled for use by individuals and groups responsible for conducting air pollution emission inventories. Emission factors given in the document over most of the common stationary and area source emission categories: fuel combustion; combustion of solid wastes; evaporation of fuels; solvents and other volatile substances; various industrial processes; and miscellaneous sources. When no specific source test data are available, these factors can be used to estimate the quantities of pollutants being released from a source or source group.

CL-FUELOIL	WASTE DERIVED FUEL OIL EMISSIONS
CL-SOLVENT	SOLVENTS
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB86-125507/XAB
Mutagenicity and Carcinogenicity Assessment of 1,3-Butadiene
EPA, Washington, DC, OHEA
S. Bayard, et al.
Sep 85, 139p, EPA-600/8-85-004F, PC A07/MF A01

Abstract: 1,3-Butadiene has been shown to be an indirect mutage in bacteria. Two of its potential metabolites, 3,4-epoxybutene and diepoxybutane, are genotoxic in prokaryote as well as eukaryote test systems. Exposure of rodents to 1,3-butadiene results in ovarian tumors in mice and testicular tumors in rats, which offers suggestive evidence that 1,3-butadiene (or a metabolite of 1,3-butadiene) may reach the germ cells. There is also evidence that the dimer of 1,3-butadiene, 4-vinyl- 1-cyclohexene, causes ovarian tumors in mice. The total body of evidence, including metabolism, mutagenicity and carcinogenicity data, suggests that 1,3-butadiene may present a genetic risk to humans. However, mutagenicity studies in mammalian test systems should be conducted to further characterize the mutagenic potential of 1,3- butadiene. On the basis of sufficient evidence from studies in two species of rodents, and inadequate epidemiologic data, 1,3-butadiene can be classified, according to EPA's Proposed Guidelines for Carcinogen Risk Assessment, as a 'probable' human carcinogen, Group B2. Using the classification scheme of the International Agency for Research on Cancer, 1,3-butadiene would be classified as a 'probable' human carcinogen, Group 2B.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
106-99-0	BUTADIENE,1,3-
28	CHEMICALS AND ALLIED PRODUCTS
282	PLASTICS MATERIALS AND SYNTHETICS
2822	SYNTHETIC RUBBER
283	DRUGS
2833	MEDICINALS AND BOTANICALS
2834	PHARMACEUTICAL PREPARATIONS
30	RUBBER AND MISC. PLASTICS PRODUCTS

PB86-126448/XAB
Second Review of New Source Performance Standards for Asphalt Concrete Plants
EPA, Research Triangle Park, NC, OAQPS
Oct 85, 146p, EPA-450/3-85-024, PC A07/MF A01

Abstract: Standards of performance for new stationary sources are established under Section 111 of the Clean Air Act. For each industrial or source category, EPA sets individual emissions standards, designations of affected facilities, monitoring requirements, and test methods and procedures. Two types of documents, the proposed background information document (BID) and the promulgation BID, are associated with the development of each NSPS. The proposal BID summarizes information gathered on the industry being regulated and discusses possible control technologies. A number of regulatory alternatives are presented, each discussing a different control technology. The economic, environmental and energy impacts of each alternative are analyzed in the proposal BID. After an alternative has been selected and a standard proposed, the promulgation BID is written. This BID contains a summary of all public comments made on the proposed standard and the EPA Administrator's response to the comments. It also describes any changes made to the standard since proposal. In addition, it contains the final environmental impact statement, which summarizes the impact of the standard. In addition to the background information documents, a review document is usually generated after EPA completes its periodic review of the promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
32	STONE, CLAY, AND GLASS PRODUCTS
327	CONCRETE, GYPSUM, AND PLASTER PRODUCTS
3272	CONCRETE PRODUCTS, NEC
35	MACHINERY, EXCEPT ELECTRICAL
353	CONSTRUCTION AND RELATED MACHINERY
3531	CONSTRUCTION MACHINERY

PB86-129566/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Acetonitrile
National Cancer Institute
Jul 85, 27p, SRC-TR-84-692, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-05-8	ACETONITRILE

PB86-129806/REB
Measuring Airborne Asbestos Following an Abatement Action
EPA, Research Triangle Park, NC, EMSL
Research Triangle Inst.
D.L. Keyes, J.J. Breen, and M.E. Beard
Jul 85, 51p, EPA-600/4-85-049, PC A04/MF A01

Abstract: One of the most critical points in an asbestos abatement project is knowing when the work has been completed, the contractor can be released, and the building can be reoccupied. This decision should be based on two factors: (1) satisfactory performance of the abatment work, and (2) thorough cleaning of the work site. As outlined herein, these factors should be evaluated by virtually inspecting the work site and by measuring the level of airborne asbestos there. The evaluation should be conducted by the asbestos program manager or the technical advisor assigned to monitor the abatement work. The report discusses various technical issues regarding the air test. Specifications are provided for air sampling and detailed guidelines are presented for using either TEM or PCM to analyze the samples. The information is designed for asbestos program managers and technical program advisors.

EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING
1332-21-4	ASBESTOS

PB86-130069/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Hydroquinone
National Cancer Institute
Jul 85, 34p, SRC-TR-1042, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
123-31-9	HYDROQUINONE

PB86-130333/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Vinylidene Chloride
National Cancer Institute
Jul 85, 39p, SRC-TR-84-632, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-35-4	DICHLOROETHYLENE,1,1-

PB86-131414/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,4-Dioxane
National Cancer Institute
Jul 85, 32p, SRC-TR-84-659, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
123-91-1	DIOXANE,1,4-

PB86-131422/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Ethylene Glycol Ethers
National Cancer Institute
Jul 85, 42p, SRC-TR-84-1039, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
109-86-4	METHOXYETHANOL,2-
110-80-5	ETHOXYETHANOL,2-

PB86-131950/REB
Development of a Sampler for Particulate-Associated and Low Volatility Organic Pollutants in Residential Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Div.
J.E. Howes, et al.
Nov 85, 47p, EPA-600/4-85-079, PC A03/MF A01

Abstract: The report describes the development of a sampler for particulate-associated and low volatility organic pollutants in residential air. The performance of the sampler inlet, which is compatible with the proposed PM-10 regulations for particulate sampling, is documented under a variety of conditions of interest. The details of construction of the sampler and the resulting acoustic performance of the unit are described. While the unit described in the report is capable of performing the task for which it has been designed, several design enhancements are recommended which would result in an improved residential air sampler.

CL-PM	PARTICULATE MATTER
CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING

PB86-132073/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Glycidyl Ethers
National Cancer Institute
Jul 85, 36p, SRC-TR-84-1044, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
122-60-1	PHENYL GLYCIDYL ETHER

PB86-132156/REB
Methods for Assessing Exposure to Chemical Substances. Volume 5. Methods for Assessing Exposure to Chemical Substances in Drinking Water
EPA, Washington, DC, Office of Toxic Substances
Versar, Inc.
D.A. Dixon et al.
Aug 85, 163p, EPA-560/5-85-005, PC A08/MF A01

Abstract: The report, one of a series of reports concerning exposure assessment, describes methods for estimating exposure to chemical substances via drinking water. Section 2 provides an overview of drinking water systems and the pathways of exposure to chemical substances in drinking water, from the source of the substance through the treatment and distribution systems to the consuming population. Section 3 catalogues and discusses the various data bases and information sources that aid in the identification of contaminated drinking water supplies. Section 4 presents and discusses methods and simulation models that can be used to estimate the concentration of chemical substances in both surface and ground water. Section 5 discusses drinking water treatment systems and processes, the effect the systems and processes have on different types of chemical substances, and how the information can be used to predict the concentration of a chemical substance in finished drinking water. Section 6 briefly discusses the enumeration and characterization of exposed populations; detailed information on the subject is provided in Volume 4 of the series. Finally, Section 7 discusses the procedures for calculating exposure as a result of contact with contaminated drinking water.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-133162/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Ethylene Dibromide (EDB)
National Cancer Institute
Jul 85, 53p, SRC-TR-84-622, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
106-93-4	ETHYLENE DIBROMIDE

PB86-134020/REB
Hydrogen Chloride and Hydrogen Fluoride Emission Factors for the NAPAP (National Acid Precipitation Assessment Program) Emission Inventory
EPA, Research Triangle Park, NC, IERL GCA Corp. D.C. Misenheimer, et al. Oct 85, 86p, EPA-600/7-85-041, PC A05/MF A01

Abstract: The report gives results of a study to develop emission factors for significant sources of hydrogen chloride and hydrogen fluoride. Information developed in the report includes significant emission sources, source descriptions, uncontrolled emission factors, controls commonly used, and average control efficiencies. An assessment of the accuracy of each efficiency factor is also included.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
7647-01-0	HYDROGEN CHLORIDE
7664-39-3	HYDROGEN FLUORIDE

PB86-134129/REB
Health Effects Assessment for Hexachlorocyclopentadiene
EPA, Cincinnati, OH, ECAO Sep 84, 46p, EPA-540/1-86-001, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for hexachlorocyclopentadiene based on both oral and inhalation exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
77-47-4	HEXACHLOROCYCLOPENTADIENE

PB86-134137/REB
Health Effects Assessment for 1,2-Dichloroethane
EPA, Cincinnati, OH, ECAO
Sep 84, 45p, EPA-540/1-86-002, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for 1,2-dichloroethane based on oral exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
107-06-2	ETHYLENE DICHLORIDE

PB86-134145/REB
Health Effects Assessment for Methyl Ethyl Ketone
EPA, Cincinnati, OH, ECAO
Sep 84, 27p, EPA-540/1-86-003, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for methyl ethyl ketone based on inhalation exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
78-93-3	BUTANONE,2-

PB86-134152/REB
Health Effects Assessment for Polychlorinated Biphenyls (PCBS)
EPA, Cincinnati, OH, ECAO
Sep 84, 66p, EPA-540/1-86-004, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A a(sub 1)* was determined for polychlorinated biphenyls based on oral exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
1336-36-3	POLYCHLORINATED BIPHENYLS

PB86-134160/REB
Health Effects Assessment for 1,1,1-Trichloroethane
EPA, Cincinnati, OH, ECAO Sep 84, 42p, EPA-540/1-86-005, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for 1,1,1-trichloroethane based on inhalation exposure, and a chronic interim acceptable intake was determined based on oral exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
71-55-6	TRICHLOROETHANE,1,1,1-

PB86-134178/REB
Health Effects Assessment for Xylene
EPA, Cincinnati, OH, ECAO
Sep 84, 39p, EPA-540/1-86-006, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Both inhalation and oral estimates of interim acceptable intakes are provided for mixed xylenes, o-xylene and m-xylene. Sufficient data were not available to develop estimates for p-xylene.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
108-38-3	XYLENE,M-
1330-20-7	XYLENE
95-47-6	XYLENE,O-

PB86-134186/REB
Health Effects Assessment for Phenol
EPA, Cincinnati, OH, ECAO
Sep 84, 28p, EPA-540/1-86-007, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for phenol based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
108-95-2 PHENOL

PB86-134194/REB
Health Effects Assessment for Ethylbenzene
EPA, Cincinnati, OH, ECAO
Sep 84, 29p, EPA-540/1-86-008, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for ethylbenzene based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
100-41-4 ETHYL BENZENE

PB86-134202/REB
Health Effects Assessment for Tetrachloroethylene
EPA, Cincinnati, OH, ECAO Sep 84, 40p, EPA-540/1-86-009, PC A03/MF A01.

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for tetrachloroethylene based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
127-18-4 TETRACHLOROETHYLENE

PB86-134210/REB
Health Effects Assessment for Chloroform
EPA, Cincinnati, OH, ECAO
Sep 84, 32p, EPA-540/1-86-010, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for chloroform base on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
67-66-3 CHLOROFORM

PB86-134228/REB
Health Effects Assessment for Cyanide
EPA, Cincinnati, OH, ECAO
Sep 84, 45p, EPA-540/1-86-011, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for cyanide based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
57-12-5 CYANIDE

PB86-134236/REB
Health Effects Assessment for Sodium Cyanide
EPA, Cincinnati, OH, ECAO
Sep 85, 44p, EPA-540/1-86-012, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for sodium cyanide based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
143-33-9 CYANIDES

PB86-134244/REB
Health Effects Assessment for Polycyclic Aromatic Hydrocarbons (PAHS)
EPA, Cincinnati, OH, ECAO Sep 84, 61p, EPA-540/1-86-013, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for polycyclic aromatic hydrocarbons based on both oral and inhalation exposure. These estimates are based on benzo(a)pyrene, the most potent constituent in PAH containing mixtures identified to date. The text provides information concerning the limitations of these estimates.

CL-POM POLYCYCLIC ORGANIC MATTER
EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT

PB86-134251/REB
Health Effects Assessment for Naphthalene
EPA, Cincinnati, OH, ECAO
Sep 84, 27p, EPA-540/1-86-014, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Sufficient data are not available at this time on naphthalene to determine either acceptable intakes or q(sub 1)*s.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
91-20-3 NAPHTHALENE

PB86-134269/REB
Health Effects Assessment for CIS-1,2-Dichloroethylene
EPA, Cincinnati, OH, ECAO
Sep 84, 25p, EPA-540/1-86-015, PC A02/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Sufficient data are not available at this time on cis-1,2-dichloroethylene to determine either acceptable intakes or q(sub 1)*s.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
156-59-2 DICHLOROETHYLENE,1,2-,CIS-

PB86-134277/REB
Health Effects Assessment for Acetone
EPA, Cincinnati, OH, ECAO
Sep 84, 32p, EPA-540/1-86-016, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for acetone based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
67-64-1 ACETONE

PB86-134293/REB
Health Effects Assessment for Nickel
EPA, Cincinnati, OH, ECAO
Sep 84, 48p, EPA-540/1-86-018, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for nickel based on oral exposure. A q(sub 1)* was determined for nickel based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7440-02-2 NICKEL

PB86-134301/REB
Health Effects Assessment for Hexavalent Chromium
EPA, Cincinnati, OH, ECAO
Sep 84, 49p, EPA-540/1-86-019, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for hexavalent chromium based on oral exposure. A q(sub 1)* was determined for hexavalent chromium based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
18540-29-9 CHROMIUM (VI) COMPOUNDS

PB86-134319/REB
Health Effects Assessment for Arsenic
EPA, Cincinnati, OH, ECAO
Sep 84, 60p, EPA-540/1-86-020, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systematic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for arsenic based on oral and inhalation exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB86-134327/REB
Health Effects Assessment for Barium
EPA, Cincinnati, OH, ECAO
Sep 84, 30p, EPA-540/1-86-021, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for barium based on oral exposure and both a subchronic and chronic interim acceptable intake was determined based on inhalation exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7440-39-3	BARIUM

PB86-134335/REB
Health Effects Assessment for Benzo(A)Pyrene
EPA, Cincinnati, OH, ECAO
Sep 84, 43p, EPA-540/1-86-022, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for benzo(a)pyrene based on both oral and inhalation exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
50-32-8	BENZO(A)PYRENE

PB86-134343/REB
Health Effects Assessment for Chlordane
EPA, Cincinnati, OH, ECAO
Sep 84, 39p, EPA-540/1-86-023, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systematic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for chlordane bases on oral exposure.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
57-74-9	CHLORDANE

PB86-134350/REB
Health Effects Assessment for Coal Tars
EPA, Cincinnati, OH, ECAO
Sep 84, 36p EPA-540/1-86-024, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for coal tars based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
8001-58-9 COAL TAR

PB86-134368/REB
Health Effects Assessment for Copper
EPA, Cincinnati, OH, ECAO
Sep 84, 45p, EPA-540/1-86-025, PC A03/MF A01

Abstract: The document represents a brief, quantatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for copper based on inhalation exposure and both a subchronic and chronic interim acceptable intake were determined based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7440-50-8 COPPER

PB86-134376/REB
Health Effects Assessment for DD.
EPA, Cincinnati, OH, ECAO
Sep 84, 55p, EPA-540/1-86-026, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A 1(sub 1)* was determined for DDT based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
50-29-3 DDT

PB86-134384/REB
Health Effects Assessment for 1,1-Dichloroethane
EPA, Cincinnati, OH, ECAO
Sep 84, 37p, EPA/540-1-86-027, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systematic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A sub-chronic and chronic interim acceptable intake was determined for 1,1-dichloroethane based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
75-34-3 DICHLOROETHANE,1,1-

PB86-134392/REB
Health Effects Assessment for Methylene Chloride
EPA, Cincinnati, OH, ECAO
Sep 84, 59p, EPA-540/1-86-028, PC A04/MF A01

Abstract: The document represents a brief, quantitively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for methylene chloride based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
75-09-2 METHYLENE CHLORIDE

PB86-134400/REB
Health Effects Assessment for Phenanthrene
EPA, Cincinnati, OH, ECAO
Sep 84, 24p, EPA-540/1-86-029, PC A02/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Sufficient data are not available at this time on phenanthrene to determine either acceptable intakes or q(sub 1)*s.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
85-01-8 PHENANTHRENE

PB86-134418/REB
Health Effects Assessment for Pyrene
EPA, Cincinnati, OH, ECAO
Sep 84, 25p, EPA-540/1-86-030, PC A02/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Sufficient data are not available at this time on pyrene to determine either acceptable intakes or q(sub 1)s.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
129-00-0 PYRENE

PB86-134426/REB
Health Effects Assessment for Sulfuric Acid
EPA, Cincinnati, OH, ECAO
Sep 84, 33p, EPA-540/1-86-031, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants. or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Since the documented effects of sulfuric acid relate solely to the portal of entry following inhalation exposure, interim acceptable intakes are not estimated. The document does present data concerning estimates of acceptable air exposure concentrations.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7664-93-9 SULFURIC ACID

PB86-134434/REB
Health Effects Assessment for 1,1,2,2-Tetrachloroethane
EPA, Cincinnati, OH, ECAO
Sep 84, 31p, EPA-540/1-86-032, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for 1,1,2,2-tetrachloroethane based on oral exposure. The document represents a brief, quanititatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for 1,1,2,2-tetrachloroethane based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
630-20-6 TETRACHLOROETHANE,1,1,1,2-

PB86-134442/REB
Health Effects Assessment for Toluene
EPA, Cincinnati, OH, ECAO
Sep 84, 45p, EPA-540/1-86-033, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for toluene based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
108-88-3 TOLUENE

PB86-134459/REB
Health Effects Assessment for 2,4,5-Trichlorophenol
EPA, Cincinnati, OH, ECAO
Sep 84, 25p, EPA-540/1-86-034, PC A02/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for 2,4,5-trichlorophenol based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
95-95-4 TRICHLOROPHENOL,2,4,5-

PB86-134467/REB
Health Effects Assessment for Trivalent Chromium
EPA, Cincinnati, OH, ECAO
Sep 84, 32p, EPA-540/1-86-035, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for trivalent chromium based on oral exposure, and a chronic interim acceptable intake was determined based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7440-47-3 CHROMIUM

PB86-134475/REB
Health Effects Assessment for Vinyl Chloride
EPA, Cincinnati, OH, ECAO
Sep 84, 67p, EPA-540/1-86-036, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for vinyl chloride based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
75-01-4 VINYL CHLORIDE

PB86-134483/REB
Health Effects Assessment for Benzene
EPA, Cincinnati, OH, ECAO
Sep 84, 54p, EPA-540/1-86-037, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for benzene based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
71-43-2 BENZENE

PB86-134491/REB
Health Effects Assessment for Cadmium
EPA, Cincinnati, OH, ECAO
Sep 84, 51p, EPA-540/1-86-038, PC A04/MF A01

Abstract: The document represents a brief, quantitively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for cadmium based on oral exposure. A q(sub 1)* was determined for cadmium based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7440-43-9 CADMIUM

PB86-134509/REB
Health Effects Assessment for Carbon Tetrachloride
EPA, Cincinnati, OH, ECAO
Sep 84, 43p, EPA-540/1-86-039, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for carbon tetrachloride based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
56-23-5 CARBON TETRACHLORIDE

PB86-134517/REB
Health Effects Assessment for Chlorobenzene
EPA, Cincinnati, OH, ECAO
Sep 84, 42p, EPA-540/1-86-040

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for chlorobenzene based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
108-90-70 CHLOROBENZENE

PB86-134525/REB
Health Effects Assessment for 1,2-T-Dichloroethylene
EPA, Cincinnati, OH, ECAO
Sep 84, 25p, EPA-540/1-86-041, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Sufficient data are not available at this time on trans-1,2-dichloroethylene to determine either acceptable intakes or q(sub 1)*s.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
156-60-5 DICHLOROETHYLENE,1,2-,TRANS-

PB86-134533/REB
Health Effects Assessment for Mercury
EPA, Cincinnati, OH, ECAO
Sep 84, 48p, EPA-540/1-86-042, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for mercury based on both oral and inhalation exposure. Estimates for mixed alkyl and inorganic mercury alone are presented.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7439-97-6 MERCURY

PB86-134541/REB
Health Effects Assessment for Pentachlorophenol
EPA, Cincinnati, OH, ECAO
Sep 84, 33p, EPA-540/1-86-048, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A subchronic and chronic interim acceptable intake was determined for pentachlorophenol based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
87-86-5 PENTACHLOROPHENOL

PB86-134558/REB
Health Effects Assessment for 2,3,7,8-Tetrachlorodibenzo-p-Dioxin
EPA, Cincinnati, OH, ECAO
Sep 84, 60p, EPA-540/1-86-044, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for 2,3,7,8-tetrachlorodibenzo-p-dioxin based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
1746-01-6 TETRACHLORODIBENZODIOXIN,2,3,7,8-,P-

PB86-134566/REB
Health Effects Assessment for 1,1,2-Trichloroethane
EPA, Cincinnati, OH, ECAO
Sep 84, 25p, EPA-540/1-86-045, PC A02/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for 1,1,2-trichloroethane based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
79-00-5 TRICHLOROETHANE,1,1,2-

PB86-134574/REB
Health Effects Assessment for Trichloroethylene
EPA, Cincinnati, OH, ECAO
Sep 84, 50p, EPA-540/1-86-046, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for trichloroethylene based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
79-01-6 TRICHLOROETHYLENE

PB86-134582/REB
Health Effects Assessment for 2,4,6-Trichlorophenol
EPA, Cincinnati, OH, ECAO
Sep 84, 30p, EPA-540/1-86-047, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for 2,4,6-trichlorophenol based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
88-06-2 TRICHLOROPHENOL,2,4,6-

PB86-134608/REB
Health Effects Assessment for Asbestos
EPA, Cincinnati, OH, ECAO
Sep 84, 70p, EPA-540/1-86-049, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessmedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. Sufficient data are not available at this time on asbestos to determine either acceptable intakes or q(sub 1)*s.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
1332-21-4 ASBESTOS

PB86-134616/REB
Health Effects Assessment for Cresols
EPA, Cincinnati, OH, ECAO
Sep 84, 29p, EPA-540/1-86-050, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determine for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for cresols based on inhalation exposure.

CL-CREOSOL CREOSOLS
EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT

PB86-134624/REB
Health Effects Assessment for 1,1-Dichloroethylene
EPA, Cincinnati, OH, ECAO
Sep 84, 45p, EPA-540/1-86-051, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub1)* was determined for 1,1-dichloroethylene based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
75-35-4 DICHLOROETHYLENE,1,1-

PB86-134632/REB
Health Effects Assessment for Glycol Ethers
EPA, Cincinnati, OH, ECAO
Sep 84, 90p, EPA-540/1-86-052, PC A05/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. The glycol ethers for which data were adequate for quantitive assessment include: 2-ethoxyethanol (both inhalation and oral); 2-methoxyethanol (inhalation); diethylene glycol monobutyl ether (oral); ethylene glycol monobutyl ether (inhalation); propylene glycol monomethyl ether (inhalation and oral); and propylene glycol monoethyl ether (oral).

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
107-98-2 PROPYLENE GLYCOL MONOMETHYL ETHER
109-86-4 METHOXYETHANOL,2-
110-80-5 ETHOXYETHANOL,2-
111-76-2 ETHYLENE GLYCOL MONOBUTYL ETHER

PB86-134640/REB
Health Effects Assessment for Hexachlorobutadiene
EPA, Cincinnatti, OH, ECAO
Sep 84, 34p, EPA-540/1-86-053, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub1)* was determined for Hexachlorobutadiene based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
87-68-3 HEXACHLORO-1,3-BUTADIENE

PB86-134657/REB
Health Effects Assessment for Iron (and Compounds)
EPA, Cincinnati, OH, ECAO
Sep 84, 45p, EPA-540/1-86-054, PC A02/MF A01

Abstract: The document represents a brief, quantitively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A chronic interim acceptable intake was determined for iron (and compounds) based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
15438-31-0 IRON

PB86-134673/REB
Health Effects Assessment for Lindane
EPA, Cincinnati, OH, ECAO
Sep 84, 49p, EPA-540/1-86-056, PC A03/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systemic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A q(sub 1)* was determined for Lindane based on oral exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
58-89-9 GAMMA-HEXACHLORO-CYCLOHEXANE

PB86-134681/REB
Health Effects Assessment for Manganese (and Compounds)
EPA, Cincinnati, OH, ECAO
Sep 84, 25p, EPA-540/1-86-057, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systematic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A sub-chronic and chronic interim acceptable intake was determined for manganese (and compounds) based on both oral and inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7439-96-5 MANGANESE

PB86-134699/REB
Health Effects Assessment for Selenium (and Compounds)
EPA, Cincinnati, OH, ECAO
Sep 84, 63p, EPA-540/1-86-058, PC A04/MF A01

Abstract: The document represents a brief, quantitatively oriented scientific summary of health effects data. It was developed by the Environmental Criteria and Assessment Office to assist the Office of Emergency and Remedial Response in establishing chemical-specific health-related goals of remedial actions. If applicable, chemical-specific subchronic and chronic toxicity interim acceptable intakes are determined for systematic toxicants, or q(sub 1)* values are determined for carcinogens for both oral and inhalation routes. A sub-chronic and chronic interim acceptable intake was determined for selenium (and compounds) based on oral exposure, and a chronic interim acceptable intake was determined based on inhalation exposure.

EPA ENVIRONMENTAL PROTECTION AGENCY
HA HEALTH ASSESSMENT
7782-49-2 SELENIUM COMPOUNDS, AS SE

PB86-135126/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Phosgene
National Cancer Institute
Jul 85, 32p, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA HEALTH ASSESSMENT
NCI NATIONAL CANCER INSTITUTE
75-44-5 PHOSGENE

PB86-135571/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Diethyl Sulfate
National Cancer Institute
Jul 85, 24p, SRC-TR-84-1032, PC A02/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA HEALTH ASSESSMENT
NCI NATIONAL CANCER INSTITUTE
64-67-5 DIETHYL SULFATE

PB86-135753/XAB
Proceedings of the NCI/EPA/NIOSH Collaborative Workshop (3rd): Progress on Joint Environmental and Occupational Cancer Studies Held at Bethesda, Maryland on March 22-23, 1984
National Cancer Institute
Mar 84, 723p, PC A99/MF E04

Abstract: A collaborate and exchange program on Environmental and Occupational Cancer Studies supported by the Cancer Institute under an interagency agreement with EPA & NIOSH.

CL-CARCIN CARCINOGENS
HA HEALTH ASSESSMENT
NCI NATIONAL CANCER INSTITUTE

PB86-136504/REB
Survey of Chloroform Emission Sources.
EPA, Research Triangle Park, NC, OAQPS
S. Dulestsky, R. Rehm, and M. Smith
Oct 85, 225p, EPA-450/3-85-026, PC A10/MF A01

Abstract: The potential public health impact of chloroform exposure is being investigated. The document contains information on the sources of chloroform emissions, current emission levels, control methods that could be used to reduce chloroform emissions, and cost estimates for employing controls.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
SA	SOURCE ASSESSMENT
67-66-3	CHLOROFORM

PB86-136546/REB
CDM 2.0 (Climatological Dispersion Model - Version 2.0) User's Guide.
EPA, Research Triangle Park, NC, ASRL
Aerocomp, Inc.
J.S. Irwin, T. Chico, and J. Catalano
Nov 85, 151p, EPA-600/8-85-029, PC A08/MF A01

Abstract: CDM-2.0 (Climatological Dispersion Model - Version 2.0) determines longterm (seasonal or annual) quasistable pollutant concentrations in rural or urban settings using average emission rates from point and area sources and a joint frequency distribution of wind direction, wind speed, and stability. The Gaussian plume hypothesis forms the basis for the calculations. Contributions are calculated assuming the narrow plume hypothesis, Calder (1971, 1977), and involve an upwind integration over the area sources. Computations can be made for up to 200 point sources and 2500 area sources at an unlimited number of receptor locations. The number of point and area sources can be easily modified within the code. CDM-2.0 is an enhanced version of CDM including the following options: 16 or 36 wind-direction sectors, initial plume dispersion, buoyancy-induced dispersion, stack-tip downwash, and gradual (transitional plume rise. The user has a choice of seven dispersion parameter schemes. Optional output includes point and area concentration roses and histograms of pollutant concentration by stability class.

DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-136587/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Aziridine
National Cancer Institute
Jul 85, 23p, SRC-TR-84-740, PC A02/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
151-56-4	ETHYLENEIMINE

PB86-136595/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Amitrole
National Cancer Institute
Jul 85, 26p, SRC-TR-84-747, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
61-82-5	AMINOTRIAZOLE,3-,1,2,4-

PB86-137163/REB
Epidemiology and Air Pollution
EPA, Washington, DC
National Research Council
Oct 85, 231p, PC A11/MF A01

Abstract: The report explores the scientific feasibility of conducting epidemiologic investigations of the health consequences of current and future air pollution. It assesses the limits of available epidemiologic techniques for studying air pollution problems and discusses opportunities for expanding these limits and for using epidemiologic studies effectively in an overall program of research on air pollution.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
ES	EPIDEMIOLOGY STUDY
10102-44-0	NITROGEN DIOXIDE
630-08-0	CARBON MONOXIDE
7446-09-5	SULFUR DIOXIDE
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB86-139375/REB
Bibliography on Indoor Air Pollution
EPA, Washington, DC, IMSD
Jun 85, 91p, EPA-IMSD-85-002, PC A05/MF A01

Abstract: A bibliography on Indoor Air Pollution, which highlights Sources of Indoor Air Pollution, Factors Contributing to Indoor Air Pollution, the Health Effects of Indoor Air Pollution, and Measures to Mitigate Indoor Air Pollution.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB86-142080/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Cresols
National Cancer Institute
Jul 85, 30p, SRC-TR-84-973, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
1319-77-3	CRESOL (ALL ISOMERS)

PB86-143344/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Benzyl Chloride
National Cancer Institute
Jul 85, 33p, SRC-TR-84-747, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
100-44-7	BENZYL CHLORIDE

PB86-143351/XAB
Monograph on the Potential Carcinogenic Risk to Humans: Turpentine
National Cancer Institute
Jul 85, 30p, SRC-TR-84-1123, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
8006-64-2	TURPENTINE

PB86-143369/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 4,4-Methylenedianiline
National Cancer Institute
Jul 85, 34p, SRC-TR-84-1048, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
101-77-9	METHYLENEDIANILINE,4,4'-

PB86-143377/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Carbon Tetrachloride
National Cancer Institute
Jul 85, 45p, SRC-TR-84-1123, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
56-23-5	CARBON TETRACHLORIDE

PB86-143385/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Pyridine
National Cancer Institute
Jul 85, 35p, SRC-TR-84-1119, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
110-86-1	PYRIDINE

PB86-143393/XAB
Monograph on the Potential Carcinogenic Risk to Humans: Nitropropanes
National Cancer Institute
Jul 85, 31p, SRC-TR-84-1047, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
79-46-9	NITROPROPANE,2-

PB86-143401/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Isopropyl Alcohol
National Cancer Institute
Jul 85, 29p, SRC-TR-84-1043, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
67-63-0	ISOPROPANOL

PB86-143419/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Gasoline
National Cancer Institute
Jul 85, 35p, SRC-TR-84-1041, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
8006-61-9	GASOLINE

PB86-143427/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Carbaryl
National Cancer Institute
Jul 85, 38p, SRC-TR-84-972, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
63-25-2	CARBARYL

PB86-143435/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Epichlorohydrin National Cancer Institute
Jul 85, 49p, SRC-TR-84-631, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
106-89-8	EPICHLOROHYDRIN

PB86-143443/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Diazinon National Cancer Institute
Jul 85, 32p, SRC-TR-84-1030, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
333-41-5	DIAZINON

PB86-143450/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Diphenyl National Cancer Institute
Jul 85, 38p, SRC-TR-84-158, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
92-52-4	BIPHENYL

PB86-143468/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 2,4-Dinitrotoluene
National Cancer Institute
Jul 85, 38p, SRC-TR-84-1053, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
121-14-2	DINITROTOLUENE,2,4-

PB86-143476/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Carbon Disulfide
National Cancer Institute
Jul 85, 39p, SRC-TR-84-986, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-15-0	CARBON DISULFIDE

PB86-143492/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,2-Dichloropropane
National Cancer Institute
Jul 85, 32p, SRC-TR-84-972, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
78-87-5	DICHLOROPROPANE,1,2-

PB86-143500/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Dimethylformamide
National Cancer Institute
Jul 85, 24p, SRC-TR-84-1029, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
68-12-2	DIMETHYLFORMAMIDE,N,N-

PB86-143518/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Arsine
National Cancer Institute
Jul 85, 34p, SRC-TR-84-728, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7784-42-1	ARSINE

PB86-143526/XAB
Monograph on Human Exposure tc Chemicals in the Workplace: 2,6-Dichloro-4-Nitroaniline
National Cancer Institute
Jul 85, 26p, SRC-TR-84-987, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
99-30-9	DICHLORAN

PB86-143534/XAB
Monograph on the Potential Carcinogenic Risk to Humans: Paraquat
National Cancer Institute
Jul 85, 27p, SRC-TR-84-1052, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
1910-42-5	METHYL VIOLOGEN TRIHYDRATE
4685-14-7	DIMETHYL-4,4-BIPYRIDINIUM,1,1-

PB86-143542/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Acrolein
National Cancer Institute
Jul 85, 34p, SRC-TR-84-691, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-02-8	ACROLEIN

PB86-143559/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Ethylene Oxide
National Cancer Institute
Jul 85, 57p, SRC-TR-84-668, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-21-8	ETHYLENE OXIDE

PB86-144615/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Aniline
National Cancer Institute
Jul 85, 38p, SRC-TR-84-729, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
62-53-3	ANILINE

PB86-144698/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Toluene
National Cancer Institute
Jul 85, 53p, SRC-TR-84-1121, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
108-88-3	TOLUENE

PB86-144714
Toxicology and Carcinogenesis Studies of Chlorobenzene (CAS No. 108-90-7)
NTP, Research Triangle Park, NC
Oct 85, 212p, NCI/NTP TR-261, PC A10/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
108-90-7	MONOCHLOROBENZENE

PB86-144888
Toxicology and Carcinogenesis Studies of 1,2-Dichlorobenzene (O-Dichlorobenzene) (CAS No. 95-50-1)
NTP, Research Triangle Park, NC
Oct 85, 183p, NCI/NTP TR-255, PC A09/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
95-50-1	DICHLOROBENZENE,1,2-

PB86-145083/REB
Revised Standards for Basic Oxygen Process Furnaces - Background Information for Promulgated Standards. Final Environmental Impact Statement
EPA, Research Triangle Park, NC, OAQPS
Dec 85, 67p, EPA-450/3-82-005B, PC A04/MF A01

Abstract: A New Source Performance Standard for secondary emissions of particulate matter from basic oxygen process furnace (BOPF) steelmaking shops is being promulgated under authority of Section 111 of the Clean Air Act. This final action is applicable to secondary emissions from any top-blown BOPF and to any hot metal transfer station or skimming station used for a bottom-blown or top-blown BOPF, for which construction, reconstruction, or modification commenced after January 20, 1983. The purpose of the final standard is to minimize BOPF secondary particulate emissions to the level attainable with the best demonstrated technology.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
35	MACHINERY, EXCEPT ELECTRICAL
356	GENERAL INDUSTRIAL MACHINERY
3567	INDUSTRIAL FURNACES AND OVENS

PB86-145521
Toxicology and Carcinogenesis Studies of Propylene (CAS No. 115-07-1)
NTP, Research Triangle Park, NC
Nov 85, 142p, NCI/NTP TR-272, PC A07/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
115-07-1	PROPYLENE

PB86-145876
Identification and Comparative Risk Assessment of Airborne Carcinogens from Combustion Sources
EPA, Research Triangle Park, NC, HERL
J. Lewtas, M.G. Nishioka, and B.A. Petersen
Jan 86, 54p, EPA-600/D-86-013, PC A04/MF A01

Abstract: The identification and assessment of airborne carcinogens has been significantly advanced by the use of short-term genetic bioassays. Bioassay-directed fractionation coupled with new organic characterization methods has provided the tools needed to more efficiently identify potential carcinogens in complex combustion emissions and urban air samples. These studies have shown that a significant portion of the mutagenicity is found in fractions more polar than polynuclear aromatic hydrocarbons (PAHs). New mass spectrometry techniques have been developed to identify and quantify the more polar mutagens in these samples. The comparative mutagenicity and carcinogenicity of a series of combustion emissions has been assessed using dose-response studies in bacteria, mammalian cells and rodents. This data base has been used to develop a comparative potency risk assessment methodology for a series of combustion emissions.

CL-CARCIN	CARCINOGENS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
RA	RISK ASSESSMENT

PB86-145919/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Acrylonitrile
National Cancer Institute
Jul 85, 71p, SRC-TR-85-192, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-13-1	ACRYLONITRILE

PB86-147212/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,2-Dichloroethane
National Cancer Institute
Jul 85, 47p, SRC-TR-84-655, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
107-06-2	ETHYLENE DICHLORIDE

PB86-147220/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Trichloroethylene
National Cancer Institute
Jul 85, 52p, SRC-TR-84-637, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
79-01-6	TRICHLOROETHYLENE

PB86-147238/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Tetrachloroethylene
National Cancer Institute
Jul 85, 47p, SRC-TR-84-629, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
127-18-4	TETRACHLOROETHYLENE

PB86-147246/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Malathion
National Cancer Institute
Jul 85, 37p, SRC-TR-84-1049, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
121-75-5	MALATHION

PB86-147253/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Pentachloronitrobenzene
National Cancer Institute
Jul 85, 28p, SRC-TR-84-1056, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
82-68-8	PENTACHLORONITROBENZENE

PB86-147261/XAB
Monograph on Human Exposure to Chemicals in the Workplace: 1,3-Butadiene
National Cancer Institute
Jul 85, 53p, SRC-TR-84-639, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
106-99-0	BUTADIENE,1,3-

PB86-147279/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Chloroform
National Cancer Institute
Jul 85, 42p, SRC-TR-84-650, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
67-66-3	CHLOROFORM

PB86-147287/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Lead
National Cancer Institute
Jul 85, 51p, SRC-TR-84-1034, PC A04/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7439-92-1	LEAD POWDER

PB86-147295/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Nitroanilines
National Cancer Institute
Jul 85, 28p, SRC-TR-84-1046, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
100-01-6	NITROANILINE,P-
88-74-4	NITROANILINE,O-

PB86-147303/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Creosote
National Cancer Institute
Jul 85, 42p, SRC-TR-85-182, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
8021-39-4	CREOSOTE

PB86-147311/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Parathion
National Cancer Institute
Jul 85, 40p, SRC-TR-84-1054, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
56-38-2	PARATHION

PB86-147329/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Lindane
National Cancer Institute
Jul 85, 37p, SRC-TR-84-1045, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
58-89-9	GAMMA-HEXACHLORO-CYCLOHEXANE

PB86-147337/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Nickel
National Cancer Institute
Jul 85, 49p, SRC-TR-84-673, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7440-02-0	NICKEL POWDER

PB86-148343/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Dichlorvos
National Cancer Institute
Jul 85, 31p, SRC-TR-84-1037, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
62-73-7	VAPONA

PB86-148350/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Methylene Chloride
National Cancer Institute
Jul 85, 49p, SRC-TR-84-1048, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
75-09-2	METHYLENE CHLORIDE

PB86-148368/XAB
Monograph on Human Exposure to Chemicals in the Workplace: Chromic Acid
National Cancer Institute
Jul 85, 42p, SRC-TR-84-675, PC A03/MF A01

Abstract: The report presents a summary and evaluation of information relevant to an occupational hazard assessment of the chemical. Pertinent toxicologic data were located through on-line and manual literature searches for the period extending back approximately ten years from 1984. No attempt was made to exhaustively review the toxicologic literature; where appropriate the reader is referred to comprehensive reviews on this topic. Special attention in this report was focused on summarizing the available information regarding the carcinogenic potential of the chemical.

HA	HEALTH ASSESSMENT
NCI	NATIONAL CANCER INSTITUTE
7738-94-5	CHROMIC ACID

PB86-148467/REB
Factors Influencing the Composition and Quantity of Passenger Car Refueling Emissions. Part 1
EPA, Research Triangle Park, NC, ASRL
T.J. Lemmons, and P.A. Gabele
Jan 86, 34p, EPA-600/D-86-011, PC A03/MF A01

Abstract: The paper describes the results of a study to examine the effects of various experimental variables on the quantity and composition of emissions associated with motor vehicle refueling. Problems related to accurate laboratory simulation of vehicle refueling are discussed. Preliminary results include emission rates for total hydrocarbons, benzene, toluene and 81 other hydrocarbon compounds for a single test vehicle.

CL-HCARB	HYDROCARBONS
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
108-88-3	TOLUENE
55	AUTOMOTIVE DEALERS & SERVICE STATIONS
554	GASOLINE SERVICE STATIONS
5541	GASOLINE SERVICE STATIONS
71-43-2	BENZENE

PB86-151784/REB
Surface Coating of Plastic Parts for Business Machines-Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Dec 85, 268p, EPA-450/3-85-019A, PC A12/MF A01

Abstract: Standards of Performance for the control of VOC emissions from affected facilities that perform exterior surface coating of plastic parts for business machines are being proposed under authority of Section III of the Clean Air Act. These standards would apply to each new, modified, and reconstructed spray booth in which plastic parts for business machines are surface coated and that commence construction on or after the date of proposal of the regulation. The document contains background information and environmental and economic impact assessments of the regulatory alternatives considered in developing the proposed standards.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
35	MACHINERY, EXCEPT ELECTRICAL
357	OFFICE AND COMPUTING MACHINES
3579	OFFICE MACHINES, NEC

PB86-155256/REB
Chemical Emergency Preparedness Program: Organizing the Community, Gathering Site-Specific Information, Contingency Plan Development, Contingency Plan Appraisal, The Criteria, Appendices
EPA, Washington, DC
November 1985, 171p, EPA-560/7-85/012, PC A08/MF A01

The document, developed by the US Environmental Protection Agency (USEPA) is part of the USEPA National Air Toxic Strategy. The purpose of the document is to provide the public and state and local officials with information to assist them in planning how to respond to accidental releases of acutely toxic chemicals. It provides recommendations on how communities get organized, gather relevant information, and develop, evaluate and update contingency plans. It also describes the criteria used by the EPA to classify chemicals as acutely toxic and provides a list of 402 chemicals that meet these criteria. See also PB86-155264.

EPA	ENVIRONMENTAL PROTECTION AGENCY
ER	ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES

PB86-155256/XAB
Chemical Emergency Preparedness Program: Organizing the Community, Gathering Site-Specific Information, Contingency Plan Development, Contingency Plan Appraisal, the Criteria, Appendices (Interim guidance)
EPA, Washington, DC,
Nov 85, 171p, EPA-560/7-85-012, PC A08/MF A01

Abstract: The document, developed by the U.S. Environmental Protection Agency (USEPA) is part of the USEPA National Air Toxics Strategy. The purpose of the document is to provide the public and state and local officials with information to assist them in planning how to respond to accidental release of acutely toxic chemicals. It provides recommendations on how communities get organized, gather relevent information, and develop, evaluate and update contingency plans. It also describes the criteria used by the EPA to classify chemicals as acutely toxic and provides a list of 402 chemicals that meet these criteria.

EPA	ENVIRONMENTAL PROTECTION AGENCY
ER	ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES

PB86-155264/REB
Chemical Emergency Preparedness Program: Chemical Profiles
EPA, Washington, DC
December 1985, 1435p, EPA-560/7-85/013, PC A99/MF E10

The document, developed by the US Environmental Protection Agency (USEPA), is part of the USEPA National Air Toxics Strategy. The document is provided in support of EPA Chemical Emergency Preparedness Program (CEPP) which deals with accidental release of acutely toxic chemicals. For each acutely toxic chemical listed in the CEPP guidance document (report number PB86-155256), a chemical profile is available. A chemical profile is a collection of information on the chemical identity hazardous identity, physical/chemical characteristics, fire and explosive hazard, reactivity, health hazard, use, and precautions for handling the chemical. The information is presented in the format that conforms as closely as possible to the Occupational Safety and Health Administration (OSHA) recommended format for a Material Safety Data Sheet (MSDS). See also PB86-155256.

EPA ENVIRONMENTAL PROTECTION AGENCY
ER ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES

PB86-155264/XAB
Chemical Emergency Preparedness Program: Chemical Profiles (Interim guidance)
EPA, Washington, DC
Dec 85, 1435p, EPA-560/7-85-013, PC A99/MF E10

Abstract: The document, developed by the U.S. Environmental Protection Agency (USEPA) is part of the USEPA National Air Toxics Strategy. The document is provided in support of EPA Chemical Emergency Preparedness Program (CEPP) which deals with accidental release of acutely toxic chemicals. For each acutely toxic chemical listed in the CEPP guidance document (report number PB86-155256), a chemical profile is available. A chemical profile is a collection of information on the chemical identity hazardous identity, physical/chemical characteristics, fire and explosive hazard, reactivity, health hazard, use, and precautions for handling and use of the chemical. The information is presented in the format that conforms as closely as possible to the Occupational Safety and Health Administration (OSHA) recommended format for a Material Safety Data Sheet (MSDS).

EPA ENVIRONMENTAL PROTECTION AGENCY
ER ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES

PB86-157211/REB
Methods for Assessing Exposure to Chemical Substances. Volume 6. Methods for Assessing Occupational Exposure to Chemical Substances
EPA, Washington, DC, OTS
Versar, Inc.
H.L. Schultz, et al.
Aug 85, 395p, EPA-560/5-85-006, PC A17/MF A01

Abstract: The report, one of a series of reports concerning exposure assessment, describes method and catalog information sources for estimating exposure to chemical substances in the occupational environment. The report provides specific guidance for conducting the various component analyses of an occupational exposure assessment. It details approaches used to identify chemical manufacturing, processing, and use locations, and for determining the chemical processes used. The types of monitoring data useful in occupational exposure assessments are addressed, as are relevant QA/QC considerations. The mass balance approach to estimating workplace contaminant concentrations in the absence of pertinent monitoring data is detailed, as are methods for evaluating contaminant transport and transformation in the workplace, and attendant worker exposure pathways. Procedures for identifying, characterizing, and enumerating exposed worker populations are outlined, and methods are provided for calculating the level of exposure experienced by each population.

EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
28 CHEMICALS AND ALLIED PRODUCTS

PB86-165057/REB
Evaluation of Asbestos Abatement Techniques. Phase 1. Removal
EPA, Washington, DC, OTS
Battelle Columbus Div., Washington, DC.
J. Chesson, et al.
Oct 85, 211p, EPA-560/5-85-019, PC A10/MF A01

Abstract: Airborne asbestos levels were measured by transmission electron microscopy (TEM), scanning electron microscopy (SEM) and phase contrast microscopy (PCM) before, during and after removal of sprayed-on acoustical plaster from the ceilings of four suburban schools. Air samples were collected at three types of sites: indoor sites with asbestos-containing material (ACM), indoor sites without ACM (indoor control), and sites outside the building (outdoor control). Bulk samples of the ACM were collected prior to the removal and analyzed by polarized light microscopy (PLM). A vigorous quality assurance program was applied to all aspects of the study. Airborne asbestos levels were low before and after removal. Elevated, but still relatively low, levels were measured outside the work area during removal. This emphasizes the need for careful containment of the work area.

CT CONTROL TECHNOLOGY DOCUMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
1332-21-4 ASBESTOS

PB86-166675
Toxicology and Carcinogenesis Studies of Chlorodibromomethane (CAS No. 124-48-1)
NTP, Research Triangle Park, NC
Aug 85, 167p, NCI/NTP TR-282, PC A08/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA HEALTH ASSESSMENT
NTP NATIONAL TOXICOLOGY PROGRAM
TT TOXICITY TESTING
124-48-1 CHLORODIBROMOMETHANE

PB86-167020/REB
Evaluation of Control Technologies for Hazardous Air Pollutants. Volume 1. Technical Report
EPA, Research Triangle Park, AEERL
Pacific Environmental Services, Inc.
R.Y. Purcell, and G.S. Shareef
Feb 86, 368p, EPA-600/7-86-009A, PC A16/MF A01

Abstract: The manual is an aid to EPA regional, state, and local air pollution control agency technical personnel in sellecting, evaluating, and developing costs of air pollution control techniques for reducing or eliminating the emission of potentially hazardous air pollutants (HAPs) from industrial/commercial sources. It contains information that should be useful for reviewing permit applications or for informing interested parties as to the type, basic design, and cost of available HAP control systems. Since the definition of a HAP is very broad (encompasses potentially thousands of compounds), it is not possible for the handbook to include an all-inclusive list of HAP compounds and compound-specific control techniques. However, there are only a few available generic air pollution control techniques, and the factors affecting their cost and performance as applied to many noncriteria pollutants have been identified and discussed in the literature.

CT CONTROL TECHNOLOGY DOCUMENT
EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

PB86-167038/REB
Evaluation of Control Technologies for Hazardous Air Pollutants. Volume 2. Appendices
EPA, Research Triangle Park, NC, AEERL
Pacific Environmental Services, Inc.
R.Y. Purcell, and G.S. Shareef
Feb 86, 294p, EPA-600/7-86-009B, PC A13/MF A01

Abstract: The manual is an aid to EPA regional, state, and local air pollution control agency technical personnel in sellecting, evaluating, and developing costs of air pollution control techniques for reducing or eliminating the emission of potentially hazardous air pollutants (HAPs) from industrial/commercial sources. It contains information that should be useful for reviewing permit applications or for informing interested parties as to the type, basic design, and cost of available HAP control systems. Since the definition of a HAP is very broad (encompasses potentially thousands of compounds), it is not possible for the handbook to include an all-inclusive list of HAP compounds and compound-specific control techniques. However, there are only a few available generic air pollution control techniques, and the factors affecting their cost and performance as applied to many noncriteria pollutants have been identified and discussed in the literature.

CT CONTROL TECHNOLOGY DOCUMENT
EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

PB86-167103
Toxicology and Carcinogenesis Studies of Chrysotile Asbestos (CAS No. 12001-29-5)
NTP, Research Triangle Park, NC
Nov 85, 382p, NCI/NTP TR-295, PC A17/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA HEALTH ASSESSMENT
NTP NATIONAL TOXICOLOGY PROGRAM
TT TOXICITY TESTING

PB86-167350/REB
EPA (Environmental Protection Agency) Complex Terrain Model Development. Fifth Milestone Report - 1985
EPA, Research Triangle Park, NC, ASRL
Environmental Research and Technology, Inc.
D.C. DiCristofaro
Jan 86, 309p, EPA-600/3-85-069, PC A14/MF A01

Abstract: The Complex Terrain Model Development (CTDM) project is being sponsored by the U.S. Environmental Protection Agency to develop atmospheric dispersion models to simulate air pollutant concentrations in complex terrain that result from emission from large sources. The emphasis of the program is to develop models with known accuracy and limitations for simulating one-hour concentrations in high terrain during stable conditions. The Fifth Milestone Report documents work accomplished from June 1984 through May 1985. It describes in detail the August 1984 Full Scale Plume Study, including its setting, the experimental design, and the resulting data base. The further development of CTDM is described. Mathematical descriptions of the modifications to the model are presented. The latest version of the model has been tested using a subset of impingement hours from the CCB, HBR, and FSPS data bases. An EPA Fluid Modeling Facility report describing towing tank simulations to characterize the effects of stability on the horizontal and vertical deflections around an isolated hill is included as an appendix.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

PB86-171527
Emission Factors for Equipment Leaks of VOC and HAP
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
J.H.E. Stelling III
Feb 86, 70p, EPA-450/3-86-002, PC A04/MF A01

Abstract: The report summarizes the development of emission factors for volatile organic compound (VOC) equipment leaks. The background information used in emission factor development is reviewed. The estimation techniques for generation of VOC emission factors are described and illustrated with an example. The application of the estimation techniques is demonstrated for both VOC and hazardous air pollutants (HAPs).

CL-VOC VOLATILE ORGANIC COMPOUNDS
EF EMISSION FACTOR
EPA ENVIRONMENTAL PROTECTION AGENCY

PB86-172095/REB
Preliminary Assessment of Hazardous Waste Pre-treatment as an Air Pollution Control Technique
EPA, Cincinnati, OH, HWERL
Research Triangle Inst.
J.J. Spivey, et al.
Mar 86, 276p, EPA-600/2-86-028, PC A13/MF A01

Abstract: The report evaluates twelve commercially available treatment techniques for their use in removing volatile constituents from hazardous and potentially hazardous waste streams. A case study of the cost of waste treatment is also provided for each technique. The results show that the air stripping or evaporation coupled with carbon adsorption of the off gases; steam stripping; and batch distillation are the most widely applicable pretreatment techniques. The cost-effectiveness of pretreatment varies widely with waste stream characteristics and type of pretreatment, with typical values being between $55 and $1,800 per megagram of volatile removed.

CL-HAZWAST	HAZARDOUS WASTES
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-174489/XAB
Updated Carcinogenicity Assessment for Tetrachloroethlyene (Perchloroethylene, PERC, PCE): Addendum to the Health Assessment Document for Tetrachloroethylene (Perchloroethylene)
EPA, Washington, DC, OHEA
C.W. Chen, C.B. Hiremath, J.C. Parker
Apr 86, 82p, EPA-600/1-82-005FA, PC A05/MF A01

Abstract: The Office of Health and Environmental Assessment has prepared the addendum to serve as a source document for EPA use. The addendum updates EPA's July 1985 Health Assessment Document for Tetrachloroethylene (Perchloroethylene, PERC, PCE) by providing a review of the findings of the draft National Toxicology Program (NTP) Technical Report on the Toxicology and Carcinogenesis Studies of Tetrachloroethylene in F344/N rats and B6C3F1 mice (Inhalation studies). The addendum discusses the ways in which the data impact assessment of the weight-of-evidence for the carcinogenicity of PCE, and uses relevant data to develop a revised unit risk estimate for inhalation exposure to PCE.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
127-18-4	TETRACHLOROETHYLENE

PB86-175999/REB
Supercritical Fluid Extraction of Particulate and Adsorbent Materials
EPA, Research Triangle Park, NC, EMSL
Battelle Pacific Northwest Labs.
B.W. Wright, and R.D. Smith
Mar 86, 79p, EPA-600/4-86-017, PC A05/MF A01

Abstract: The report is a summary of work performed by PNL on the extraction of semivolatile organic materials (SVOCs), for example, polynuclear aromatic compounds, from various adsorbents and environmental matrices, using supercritical fluids (SCFs) as extractants. The results of the work show that supercritical fluids are effective extractants for many SVOCs, and are often competitive with conventional Soxhlet extraction. Advantages of SCFs over conventional methods include higher extraction efficiency, more rapid extraction, and reduced decomposition of thermally labile compounds.

AM	AMBIENT MONITORING
CL-PM	PARTICULATE MATTER
CL-SVOC	SEMIVOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB86-176039/REB
EPA (Environmental Protection Agency) Program to Demonstrate Mitigation Measures for Indoor Radon: Initial Results
EPA, Research Triangle Park, NC, AEERL
D.B. Henschel, and A.G. Scott
Apr 86, 16p, EPA-600/D-86-060, PC A02/MF A01

Abstract: The paper gives initial results of an EPA program to demonstrate mitigation measures for indoor radon. EPA has installed radon mitigation techniques in 18 concrete block basement homes in the Reading Prong area of eastern Pennsylvania, all designed to demonstrate techniques which would have low to moderate installation and operating costs. Where major openings in the block walls can be closed effectively, suction on the wall voids has proved to be extremely effective. However, where major openings within the walls are inaccessible, it is more difficult and/or more expensive to develop adequate suction on the void network, and performance is reduced. Testing is continuing to demonstrate how to achieve high performance with wall suction in homes with such difficult-to-close walls.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
10043-92-2	RADON
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB86-178076/REB
Summary Review of the Health Effects Associated with Phenol: Health Issue Assessment
EPA, Washington, DC, OHEA
R.M. Bruce
May 86, 44p, EPA-600/8-86-003, PC A03/MF A01

Abstract: Larger production volume and natural sources of monohydroxybenzene, generically known as phenol, make exposure likely. Occupational and environmental exposure to phenol is largely restricted to source dominated areas, however. Based on monitoring data, ambient levels of phenol are extremely low compared with the present TLV (threshold limit value) of 5 ppm (19 mg/cu.m.). The STEL (short-term exposure level) for phenol is 10 ppm (38 mg/cu.m.). The estimated half-life of phenol is 0.5 day, and less than 1 minute in polluted atmospheres. The odor recognition threshold of phenol is 0.05 ppm (0.19 mg/cu.m.), a level far below the levels where toxic effects have been reported. Phenol is absorbed by animals and humans after oral, inhalation, or dermal exposure. Muscle weakness, convulsions, and coma are the predominant symptoms after exposure to lethal concentrations. After absorption, exogenous phenol is metabolized principally by the liver, and excretion occurs mainly via urine.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
108-95-2	PHENOL

PB86-181179/AS
Air Toxics Information Clearinghouse: Rationale for Air Toxics Control in Seven State and Local Agencies
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
A.S. Pelland, P.A. Cruse
Dec 85, 100p, EPA-450/5-86-005, PC A06/MF A01

Abstract: This report describes the approach used by four State and three local agencies for determining acceptable ambient concentrations and, if applicable, emission limits for noncriteria air pollutants. The agencies included are located in: Chattanooga/Hamilton County (Tennessee), Connecticut, Maine, Mississippi, Nevada, Philadelphia (Pennsylvania), and Sacramento County (California).

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-181690/AS
Air Toxics Information Clearinghouse: Ongoing Research and Regulatory Development Projects
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
R.C. Mead, C.E. Benton, A.S. Pelland
Mar 85, 81p, EPA-450/5-86-004, PC A05/MF A01

Abstract: The purpose of this document, published by the Air Toxics Information Clearinghouse, is to inform state and local policy makers of current research and regulatory development projects underway at EPA and the National Institute of Occupational Safety and Health (NIOSH), and to help them identify sources of specific air toxics information. Every effort has been made to ensure accuracy as of December 1984, the date that compilation of information was completed. However, Agency policies, priorities, and funding levels reflected by the projects listed in this document may change affecting estimated project completion dates and whether or not regulatory actions are finally taken.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-183076/REB
Field Evaluation of Hazardous Waste Pretreatment as an Air Pollution Control Technique
EPA, Cincinnati, OH, HWERL
Research Triangle Inst.
C.C. Allen, S. Simpson, and G. Brant
Apr 86, 216p, EPA-600/2-86-048, PC A10/MF A01

Abstract: Three commonly practiced commercial treatment processes were investigated for the removal of volatile organic compounds (VOCs) from hazardous waste: thin-film evaporation, steam stripping and fractional distillation. The data collected included limitations of the treatment technology, the VOC removal effectiveness, the characteristics of residuals and cost information. Three thin-film evaporators were evaluated, each treating different types of wastes. There was a large variation in the amount of highly volatile compounds removed by the technique, depending upon the boiling temperature of the waste stream. Four waste streams were treated in a batch steam stripper. Over 90% VOC removal was obtained in all four cases. Two aqueous/organic waste streams were treated using fractional distillation and over 90% VOC removal was obtained in both cases.

CL-HAZWAST	HAZARDOUS WASTES
CL-VOC	VOLATILE ORGANIC COMPOUNDS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-183944/REB
Health Assessment Document for Beryllium: Review Draft (April 1986)
EPA, Washington, DC, OHEA
Apr 86, 190p, EPA-600/8-84-026B, PC A09/MF A01

Abstract: The chemical and geochemical properties of beryllium resemble those of aluminum, zinc, and magnesium. This resemblance is primarily due to similar ionic potentials which facilitate covalent bonding. The three most common forms of beryllium in industrial emission are the metal, the oxide, and the hydroxide. The main routes of beryllium intake for man and animals are inhalation and ingestion. While the absorption of ingested beryllium is probably quite insignificant, the chemical properties of beryllium are such that transformation of soluable to insoluble forms of inhaled beryllium results in long retention time in the lungs. The tissue distribution of absorbed beryllium is characterized by main deposition in the skeleton where the biological half-life is fairly long. The lung is the critical organ of both acute and chronic non-carcinogenic effects. However, unlike most other metals, the lung effects caused by chronic exposure to beryllium may be combined with systemic effects, of which one common factor may be hypersensitation.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7440-41-7	BERYLLIUM

PB86-187903
Toxicology and Carcinogenesis Studies of Dichloromethane (Methylene Chloride) (CAS No. 75-09-2)
NTP, Research Triangle Park, NC
Jan 86, 210p, NCI/NTP TR-306, PC A10/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
75-09-2	METHYLENE CHLORIDE

P886-190048/REB
Characterization of Organic Emissions from Selected Materials in Indoor Use
EPA, Research Triangle Park, NC, AEERL
B.A. Tichenor, and M.A. Mason
Apr 86, 17p, EPA-600/D-86-088, PC A02/MF A01

Abstract: The paper provides data from small-chamber testing of a latex caulk and a floor adhesive, as part of EPA's ongoing evaluation of organic emissions from indoor materials. Among the conclusions drawn from presented data are: (1) low air exchange rates promote high concentrations of organic vapors emitted from indoor sources. (2) high air exchange rates promote rapid vaporization of organics, leading to high emission factors in the initial testing phase; (3) cumulative mass emissions at the end of the testing period are approximately equal for all air exchange rates; and (4) organic emissions for different materials vary widely. Further research could provide additional valuable information, including identifying critical parameters affecting chamber emissions for a variety of building materials and consumer products. Research is underway to determine how changes in temperature and humidity affect organic emissions. Efforts continue to improve upon available models for relating chamber test conditions to emissions.

CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
IA INDOOR AIR

P886-190303/REB
EPA (Environmental Protection Agency) Research on Indoor Air Quality
EPA, Research Triangle Park, NC, OAQPS
W.G. Tucker
Apr 86, 15p, EPA-600/D-86-093, PC A02/MF A01

Abstract: The paper discusses EPA's research program on indoor air quality. Now in its third year, it is a broad-based program that includes: field surveys of pollutant concentrations in homes, characterization of emissions from sources, health studies of genotoxic and irritant/neurobehavioral effects, and a limited amount of research and development of indoor air quality controls. The primary emphasis in all areas is on organic compounds, except for controls, where emphasis is on particles (although even there the orientation is partly organic, since indoor air respirable particles are mostly organic condensation aerosols). The area of greatest overall emphasis has been on a national field survey of air quality in homes. The field survey will obtain distributions of exposure estimates to indoor and outdoor air pollutants. It will help confirm whether indoor concentrations are in fact much higher than outdoor concentrations, as suggested by several small field studies that have been done to date.

CL-ORGANIC ORGANIC COMPOUNDS
CL-PM PARTICULATE MATTER
EPA ENVIRONMENTAL PROTECTION AGENCY
IA INDOOR AIR

PB86-191376/REB
Indoor Air Pollution Source Database.
EPA, Research Triangle Park, NC, AEERL J.M. Crum
APR 86, 11P, EPA-600/D-86-082,PC A02/MF A01

Abstract: The paper, directed to individuals interested in indoor air pollution, is an introduction to, and directions for the use of, the indoor air pollution source database (also known as the indoor air source emissions database). The database is a computerized system containing source characterization studies done in the U.S. and abroad. It addresses the entire range of indoor air sources: combustion, material, and activity sources. It provides ready access to such information as: emission factors determined for each of the pollutants and sources tested, data about the test facility, conditions of the experiment, sampling and analytical data, and an abstract of each publication. The program also includes options for researchers carrying out their own source characterization studies, allowing them to add their own data to the database and to arrange the data in a format suitable for searching. The database is currently available in a dBase III version or a Clipper compiled version.

CL-IAP INDOOR AIR POLLUTANTS
EPA ENVIRONMENTAL PROTECTION AGENCY
IA INDOOR AIR

PB86-191558/REB
Sample Design Considerations for Indoor Air Exposure Surveys
EPA, Research Triangle Park, NC, EMSL
D.T. Mage, B.G. Cox, and F.W. Immerman
Apr 86, 16p, EPA-600/D-86-079, PC A02/MF A01

Abstract: Recent studies have shown that the traditional practice of monitoring outdoor (ambient) air quality leads to little information regarding the exposures of people in indoor surroundings. Consequently, EPA has begun a series of studies to determine the air pollution exposures people are subjected to in their daily non-outdoor activities at home, in traffic, and at work. The paper describes the factors that should be considered in developing a survey to describe the air pollution exposures that people experience in their home environment. An extensive literature exists which describes general sampling techniques for performing these surveys. Some types of surveys, such as health care surveys or business surveys, are best addressed by particular types of survey designs. The paper discusses the design considerations that make indoor air exposure surveys, where human subjects are recruited either to carry personal monitors or to allow monitoring in their homes, different from the traditional surveys of opinions and attitudes.

CL-IAP INDOOR AIR POLLUTANTS
EA EXPOSURE ASSESSMENT
EPA ENVIRONMENTAL PROTECTION AGENCY
IA INDOOR AIR

PB86-194446/REB
Assessment of Assay Methods for Evaluating Asbestos Abatement Technology
EPA, Cincinnati, OH, HWERL
PEI Associates, Inc.
M.A. Karaffa, R.S. Amick, and A. Crone
Apr 86, 86p, EPA-600/2-86-053, PC A05/MF A01

Abstract: The project focused on the adequacy of the EPA's previously recommended phase contrast light microscope (PCM) method of analysis and sample collection technique. The PCM method was compared with transmission electron microscope (TEM) methods and the feasibility of an alternative "aggressive" sampling technique was investigated. The results of the study established the advantages and limitations of applying both PCM and TEM analytical methods, both separately and in conjunction with an aggressive sampling technique in the evaluation of air quality following asbestos abatement. The project was conducted during the post abatement phase of asbestos removal. Reliable methods of air sampling and analysis permit the use of monitoring results to be included in evaluating the efficacy of asbestos abatement methods and in developing better technical guidance for abatement contractors, building owners, and other parties directly responsible for remedial asbestos programs.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
1332-21-4	ASBESTOS

PB86-196904/REB
Calciners and Dryers in Mineral Industries; Background Information for Proposed Standards
EPA, Research Triangle Park, NC, OAQPS
Oct 85, 701p, EPA-460/3-85-025A, PC A99/MF E04

Abstract: Standards of performance for the control of emissions from calciners and dryers in mineral industries are being proposed under the authority of Section III of the Clean Air Act. These standards would apply to new, modified, or reconstructed calciners and dryers in 17 mineral industries. The document contains background information and environmental and economic impact assessments of the regulatory alternatives considered in developing the proposed standards.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
14	NONMETALLIC MINERALS, EXCEPT FUELS

PB86-197662/REB
Summary Overview of Health Effects Associated with Chloroprene: Health Issue Assessment
EPA, Research Triangle Park, NC, ECAO
Aug 85, 21 p, EPA-600/8-85-011F, PC A02/MF A01

Abstract: The purpose of the report is to summarize available information concerning possible health effects associated with exposure to chloroprene. Emphasis has been placed on reviewing the available information useful for determining whether or not chloroprene affects human health at air concentrations which might be encountered by the general public under ambient conditions. The summary addresses the acute and chronic toxicity, reproductive effects, mutagenicity, and carcinogenicity of chloroprene. Also discusses is background information on air quality aspects of chloroprene, including sources, distribution, and fate.

CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
126-99-8	CHLOROBUTADIENE,2-,1,3-

PB86-200466
NATIONAL AIR TOXICS INFORMATION CLEARINGHOUSE: NATICH DATA BASE REPORT ON STATE AND LOCAL AGENCY AIR TOXICS ACTIVITIES
EPA, RESEARCH TRIANGLE PARK, NC, OAQPS
RADIAN CORP.
SEP 85, EPA-450/5-86-006

THE PURPOSE OF THIS REPORT IS TO DISSEMINATE INFORMATION PROVIDED TO THE NATICH DATA BASE BY STATE AND LOCAL AIR AGENCIES ON THEIR AIR TOXICS ACTIVITIES. THIS COMPUTER-GENERATED REPORT SUPERSEDES MANUALLY PREPARED INTERIM REPORTS PUBLISHED IN SEPTEMBER 1984 AND MARCH 1985. IT BOTH UPDATES AND EXTENDS THE INFORMATION IN THE FIRST TWO REPORTS AND CONTAINS INFORMATION RECEIVED UP UNTIL JULY 1985. THIS REPORT INCLUDES A LISTING OF STATE AND LOCAL AGENCIES THAT HAVE PROVIDED INFORMATION TO THE CLEARINGHOUSE, AIR TOXICS CONTACTS, REGULATORY PROGRAM INFORMATION, ACCEPTABLE AMBIENT CONCENTRATIONS AND STANDARDS, POLLUTANT RESEARCH INFORMATION, METHODS DEVELOPMENT ACTIVITIES, PERMITTING INFORMATION, SOURCE TESTING INFORMATION, AND AMBIENT MONITORING INFORMATION.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-203742
Toxicology and Carcinogenesis Studies of Diallyl Phthalate (CAS No. 131-9)
NTP, Research Triangle Park, NC
Aug 85, 150p, NCI/NTP TR-284, PC A07/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
131-17-9	DIALLYL PHTHALATE

PB86-206901/REB
Kraft Pulp Mills - Background Information for Promulgated Revisions to Standards
EPA, Research Triangle Park, NC, OAQPS
May 86, 41p, EPA-450/3-85-020, PC A03/MF A01

Abstract: As a result of the 4-year review of New Source Performance Standards (NSPS) for Kraft Pulp Mills, the Agency proposed revisions to the NSPS, which were promulgated on February 23, 1978, and requested public comments. The document summarizes the comments which were received and presents the Agency's response to those comments.

CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS

PB86-208295/XAB
Current Intelligence Bulletin 45, Polychlorinated Biphenyls (PCB's): Potential Health Hazards from Electrical Equipment Fires or Failures
NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH, FEB 86,30P,
NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH PUB NO. 86-111,
AVAIL. NIOSH, PC A03/MF A01

Abstract: Numerous fire-related incidents involving electrical equipment con-taining polychlorinated biphenyls (PCB's) have resulted in widespread contamination of buildings with PCB's and, in some cases, with polychlorinated dibenzofurans (PCDF's) and polychlorinated dibenzo-p-dioxin (PCDD's), including 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Emergency response personnel, maintenance or cleanup workers, or building occupants may be exposed to the compounds by inhalation, ingestion, or skin contact. Based on existing evidence, of the National Institute for Occupational Safety and Health (NIOSH) continues to recommend the PCB's and TCDD be regarded as potential human carcinogens in the workplace. Existing evidence also suggests that PDF's may pose a risk to human health. Therefore, NIOSH recommends that occupational exposure to PCB's, PCDF's, and PCDD's resulting from electrical equipment fires or failures be controlled to the lowest feasible limit, and that workers involved in decontamination activities use all necessary protective measures to prevent exposure.

CL-DIOXIN	DIOXINS
EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
1336-36-3	POLYCHLORINATED BIPHENYLS

PB86-208303/XAB
Current Intelligence Bulletin 46, Methylene Chloride
NIOSH
Apr 86, 23p, NIOSH PUB No. 86-114, AVAIL NIOSH, PC A02/MF A01

Abstract: B6C3F1 mice exposed to methylene chloride in air developed cancers (alveolar/bronchiolar carcinomas) and tumors (alveolar/-bronchiolar adenomas) of the lung, and cancers (hepatocellular carcinomas) of the liver. Fischer 344/N rats exposed to methylene chloride in air developed tumors (fibromas and fibroadenomas) of the mammary gland. Sprague-Dawley rats exposed to methylene chloride in air developed cancers (sarcomas) of the salivary glands and tumors (fibromas and fibroadenomas) of the mammary glands. Though existing epidemiologic data derived from workers exposed to methylene chloride are inconclusive, the observation of cancers and tumors in both rats and mice treated with methylene chloride meets the criteria established in the Occupational Safety and Health Administration (OSHA) Cancer Policy for considering methylene chloride a "potential occupational carcinogen." Therefore, the National Institute for Occupational Safety and Health (NIOSH) recommends that worker exposure to methylene chloride be controlled to the lowest feasible limit.

HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
TT	TOXICITY TESTING
75-09-2	METHYLENE CHLORIDE

PB86-212099/REB
Summary of Regulatory Analysis for New Source Performance Standards: Industrial-Commercial-Institutional Steam Generating Units of Greater than 100 Million Btu/Hour Heat Input
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Jun 86, 291p, EPA-460/3-86-005, PC A13/MF A01

Abstract: The document summarizes the environmental, economic, and cost analyses that were conducted to support the development of new source performance standards limiting emissions of SO2 from industrial-commercial-institutional steam generating units. Alternative SO2 control technologies and regulatory options are analyzed in terms of SO2 emission reduction capability, costs of control, secondary environmental impacts, national impacts, and industry-specific economic impacts. In addition, the impacts of allowing emission credits for cogeneration and mixed fuel-fired steam generating units are discussed. The document is intended to serve as an overview of the analyses and regulatory alternatives considered during the standards development process.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
7446-09-5	SULFUR DIOXIDE

PB86-215258/REB
Interim Indoor Radon and Radon Decay Product Measurement Protocols
EPA, Washington, DC, ORP
M. Ronca-Battista et al.
Apr 86, 65p, EPA-520/1-86-03, PC A04/MF A01

Abstract: The report provides EPA's procedures for measuring radon concentrations in houses with continuous radon monitors, charcoal canisters, alpha-track detectors, and grab radon techniques. It also provides procedures for measuring radon decay product concentrations with a continuous working level monitor, a radon progeny integrating sampling unit (RPISU), and grab radon decay product methods. Specifications for the location of the measurement, the house conditions during the measurement, and minimum requirements for quality control are included in each procedure.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
10043-92-2	RADON

PB86-216967
Toxicology and Carcinogenesis Studies of Benzene
(CAS No. 71-43-2)
NTP, Research Triangle Park, NC
Apr 86, 269p, NCI/NTP TR-289, PC A12/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
71-43-2	BENZENE

PB86-217064/REB
Harvard's Indoor Air Aollution/Health Study
EPA, Research Triangle Park, NC, HERL
Harvard School of Public Health, Boston, MA.
J.D. Spengler, et al.
Jun 86, 21p, EPA-600/D-86-121, PC A02/MF A01

Abstract: An indoor air pollution/acute respiratory health study is being conducted by researchers at the Harvard University School of Public Health. Upper and lower respiratory symptoms of 300 children living in Watertown, Massachusetts, have been recorded on a daily diary by a parent. Every two weeks the parent is called for the illness/wellness history. At the end of the month the calendar is returned by mail. Families participated in the survey from the time of induction (after September 1, 1984) to August 31, 1985: Coincident with the symptom survey, indoor air pollution measurements are made in each home and in the elementary schools of the participating student.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
82	EDUCATIONAL SERVICES
829	SCHOOLS & EDUCATIONAL SERVICES, NEC
8299	SCHOOLS & EDUCATIONAL SERVICES, NEC
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB86-218435/REB
Indoor Air Sampling and Mutagenicity Studies Related to Emissions from Unvented Coal Combustion
EPA, Research Triangle Park, NC., HERL
J.L. Mumford, et al.
Jul 86, 16p, EPA-600/D-86-141, PC A02/MF A01

Abstract: The purpose of the study is to develop sampling strategies and bioassay methods for indoor air in homes. The work reported here was conducted to prepare for a joint U.S.-China field study in Xuan Wei County, Yunnan Province, southern China, where the residents traditionally burn coal or wood for domestic cooking and heating without flue ventilation. These residents are exposed daily to high levels of combustion smoke and have unusually high lung cancer mortality rates, the women's rate the highest in China, and the men's rate among the highest. The paper reports the chemical and biological characterization of coal emissions from a simulated combustion laboratory.

CL-IAP	INDOOR AIR POLLUTANTS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB86-218443/REB
Selected Organic Pollutant Emissions from Unvented Kerosene Heaters
EPA, Research Triangle Park, NC, HERL
California Univ., Berkeley
G.W. Traynor, et al.
Jul 86, 22p, EPA-600/D-86-142, PC A02/MF A01

Abstract: An exploratory study was performed to assess the semivolatile and nonvolatile organic-compound emissions from unvented kerosene space heaters. A well-tuned radiant heater and a mal-tuned convective heater were used for the study. Each heater was operated in a 27-cu m chamber with a precribed on/off pattern. Organic compounds were collected on teflon-impregnated glass filters backed by XAD-2 resin and analyzed by gas chromatography/mass spectrometry. Pollutant source strengths were calculated using a mass-balance equation. The results show that kerosene heaters can emit polycyclic aromatic hydrocarbons (PAHs), nitrated PAHs; alkyl benzenes; pentachlorophenol; phtalates; hydro naphthalenes; aliphatic hydrocarbons, alcohols, and ketones; and other organic compounds.

CL-CHC	CHLORINATED HYDROCARBONS
CL-IAP	INDOOR AIR POLLUTANTS
CL-ORGANIC	ORGANIC COMPOUNDS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
CL-PHTH	PHTHALATES
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
87-86-5	PENTACHLOROPHENOL
91-20-3	NAPHTHALENE

PB86-219193/REB
Proceedings of an Engineering Foundation Conference on Management ofAtmospheres in Tightly Enclosed Spaces Held at Santa Barbara, California on October 17-21, 1983
EPA, Research Triangle Park, NC, AEERL
Amer. Soc. of Heating, Refrigerating and Air-Conditioning Engrs.
J.E. Janssen
Jul 86, 139p, EPA-600/9-86-020, PC A07/MF A01

Abstract: The proceedings document presentations made at the Engineering Foundation Conference, held in Santa Barbara, CA, October 1983, to assess the state of knowledge about management of atmospheres in tightly enclosed spaces and to discuss the newer methods for mitigating indoor pollutants. Specific objectives of the conference were the assessment of the state of knowledge for consideration in the revision of ASHRAE Standard 62-1981 and providing background information for both DOE and EPA in planning their programs for improving indoor air quality.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
10043-92-2	RADON
50-00-0	FORMALDEHYDE
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB86-221256/REB
Health Assessment Document for Polychlorinated Dibenzofurans. Review Draft
EPA, Cincinnati, OH, ECAO
Jun 86, 385p, EPA-600/8-86-018A, PC A17/MF A01

Abstract: The health assessment document for Polychlorinated dibenzofurans (PCDFs) provides the scientific data base for utilization by U.S. EPA in its activities related to the Clean Air Act. PCDFs are a group of widespread and environmentally stable halogenated tricyclic aromatic hydrocarbons. They enter the environment as trace impurities in PCBs, Chlorophenols, PCNs, 2,4,5-T formulations and as a result of diverse combustion processes. PCBFs bioacumulate in exposed human and animal adipose rich tissues. They are extremely toxic to animals and humans. Their toxic effects are very similar to those caused by 2,3,7,8-TCDD. Information on adverse health effects in humans has derived from the observation in the isolated Japanese and Tiwanese population who accidentally consumed PCBs and PCDF-contaminated rice oil.

CL-FURAN	FURANS
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT

PB86-221835/XAB
Mortality Among Workers Exposed to Cutting Fluids and Abrasives: Bearing Plant 2
National Institute of Occupational Safety and Health
Nov 85, 88p, PC A05/MF A01

Abstract: Cause of death and job histories were obtained for 1,766 of 2,027 hourly workers with at least 5 year's exposure to cutting fluids and abrasives in the manufacture of ball bearings. Statistically significant excesses of stomach cancer existed among white men with experience grinding in cutting fluids and pancreatic cancer among white men with grinding or machining experience. Stomach cancer excess increased with duration of grinding with statistically significant proportional mortality ratios from 3.4 to 4.2 among those with over 10 years' experience. Statistically significant associations were found between lung cancer in white men and work in forging, heat treat and related jobs; lymphopoietic cancer in tool and die workers; and stomach cancer among descendents of French Canadian origin.

CL-ABRAS	ABRASIVES
CL-CUTFLU	CUTTING FLUIDS
ES	EPIDEMIOLOGY STUDY
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
35	MACHINERY, EXCEPT ELECTRICAL
356	GENERAL INDUSTRIAL MACHINERY
3562	BALL AND ROLLER BEARINGS

PB86-222353/REB

Asbestos Containing Materials in School Buildings: Bulk Sample Analysis Quality Assurance Program. Bulk Sample Rounds 12, 13 and Blind Round III

EPA, Research Triangle Park, NC, EMSL
Research Triangle Inst.
M.L. Parris and K. Starner Jul 86, 92p, EPA-600/4-86-028, PC A05/MF A01

Abstract: The report presents the results of laboratories participating in the twelfth, thirteenth and third (III) blind round of the bulk sample analysis quality assurance program sponsored by the U.S. Environmental Protection Agency. Three hundred twenty-three, 386 and 51 laboratories which analyze bulk samples (by polarized light microscopy) to determine asbestos content participated in these rounds, respectively. Laboratories received bulk samples of asbestos, asbestos substitutes or other bulk insulation materials. Three aspects of analytical results were considered: classification of a sample as either asbestos (positive) or nonasbestos (negative); identification of the specific type of asbestos present; and quantitation of the relative amount of major constituents present.

CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
829	SCHOOLS & EDUCATIONAL SERVICES, NEC
8299	SCHOOLS & EDUCATIONAL SERVICES, NEC

PB86-222544/XAB

Industrial Hygiene Characterization of Fluidized Bed Combustion Processes

National Institute of Occupational Safety and Health
Dec 85, 234p, PC A11/MF A01

Abstract: The objective of the study was to characterize current or potential occupational health problems of the fluidized bed combustion process. The assessment described herein was based on in-depth industrial hygiene surveys at three fluidized bed boiler (FBB) facilities selected to represent the industry. The results from the surveys demonstrate limited potential for occupational exposure to airborne contaminants. None of the air contaminants monitored exceeded OSHA Permissible Exposure Limits. Only sulfur dioxide, coal tar pitch volatiles, and nuisance dust approached the recommended ACGIH Threshold Limit Values. Mutagenic activity was found in high volume and bulk samples at two of the sites and appeared to correlate roughly with the air concentration of coal tar pitch volatiles detected.

CL-PM	PARTICULATE MATTER
HA	HEALTH ASSESSMENT
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
7446-09-5	SULFUR DIOXIDE
8007-45-2	COAL TAR PITCH VOLATILES

PB86-222932/REB
Hazardous Dust Control
EPA, Research Triangle Park, NC, AEERL
N. Plaks
Jul 86, 24p, EPA-600/D-86-153, PC A02/MF A01

Abstract: Hazardous particles or dusts, for purposes of the paper, are considered to be those whose size or chemical species cause harm to the population through deposition in the lungs and other portions of the pulmonary tract. A small number of pollutants, some of which are particles, have been designated under the program from the Clean Air Act for National Emission Standards for Hazardous Air Pollutants (NESHAP); a larger number are being considered for NESHAP. Several R&D needs are listed including: sensing of excess emission of hazardous dust from control equipment; need to retrofit for improved capture of small particles; improved collection of fine condensable aerosols; and modeling of control technology for hazardous particles; improved collection of fine condensable aerosols; and modeling of control technology for hazardous particles. Indoor air particles and dusts are discussed with emphasis on characterization, indoor air cleaners, and asbestos in residences. Radon in the indoor environment is discussed as an emerging problem. Finally, an indoor air-radon model is discussed linking indoor air dusts to lung deposition.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING
10043-92-2	RADON
1332-21-4	ASBESTOS
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB86-222965/REB
Overview of Indoor Radon Mitigation Alternatives and a Summary of Recent EPA (Environmental Protection Agency) Mitigation Test Results
EPA, Research Triangle Park, NC, AEERL
D.B. Henschel and A.B. Craig
Jul 86, 40p, EPA-600/D-86-148, PC A03/MF A01

Abstract: The discussion is specific to single-family homes (detached houses). Introductory information covers indoor radon sources, health effects of radon exposure, randon level monitoring methods, and a discussion on how radon enters and builds up in house air. Covered are nine methods for reducing indoor radon in detached houses: natural and forced-air ventilation, forced-air ventilation with heat recovery, active avoidance of house depressurization, sealing major radon sources, sealing radon entry routes, drain-tile soil ventilation, active ventilation of hollow-block basement walls, and sub-slab ventilation. For each method, information is presented on principles of operation, applicability, how much confidence one can have that the method can achieve radon reduction, and an estimate of installation costs. Where appropriate, drawings depict the details of method installation using terminology familiar to the building trades.

AM	AMBIENT MONITORING
CL-IAP	INDOOR AIR POLLUTANTS
CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
IA	INDOOR AIR
10043-92-2	RADON
88	PRIVATE HOUSEHOLDS
881	PRIVATE HOUSEHOLDS
8811	PRIVATE HOUSEHOLDS

PB86-222999/REB
Effects of Office Building Heating and Ventilation System Parameters on Respirable Particles
EPA, Research Triangle Park, NC, AEERL
Research Triangle Inst.
M.K. Owen, et al.
Jul 86, 27p, EPA-600/D-86-155, PC A03/MF A01

Abstract: The paper gives results of a study of particle concentrations and size distributions in a typical office building, as a function of makeup air percentages and sources. Filters of the type in use were obtained and tested for particle size dependent efficiencies. Activity and sources in the building were determined, and settings for the dampers controlling makeup air were either fully open or shut. Testing was done during occupied and relatively unoccupied periods. In-room, return, outside, and just-filtered combined air streams were sampled over a particle size range from 0.01 to 10 micrometers. Particle size distributions, mass concentrations, temperature, and humidity were determined.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PM	PARTICULATE MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR

PB86-223005/REB
Effects of Ventiliation Rates and Product Loading on Organic Emission Rates from Particleboard
EPA, Research Triangle Park, NC, AEERL
Acurex Corp.
L.H. Nelms, M.A. Mason, and B.A. Tichenor
Jul 86, 37p, EPA-600/D-86-156, PC A03/MF A01

Abstract: The paper discusses the effects of ventilation rates and product loading on organic emission rates from particleboard. Recently, investigators have confirmed the presence of varied and significant amounts of organic compounds in indoor environment, including compounds known or suspected to be health hazards. Identification of, sources of, mechanisms for entry into the environment of, and techniques for control of specific chemicals have become important research areas. For the particleboard tests, standard conditions of 23o C and 50% relative humidity were maintained. Concentrations of organic compounds detected are presented. The relationship between increasing formaldehyde concentrations and decreasing emission rates is discusses.

CL-IAP	INDOOR AIR POLLUTANTS
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
SS	SOURCE SAMPLING
24	LUMBER AND WOOD PRODUCTS
249	MISCELLANEOUS WOOD PRODUCTS
2492	PARTICLEBOARD

PB86-223054/REB
Stability of Polynuclear Aromatic Compounds Collected form Air on Quartz Fiber Filters and XAD-2 Resin
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Labs.
J.C. Chuang, S.W. Hannan, and J.R. Koetz
Jul 86, 26p, EPA-600/4-86-029, PC A03/MF A01

Abstract: The objective of the project was to investigate the stability of polynuclear aromatic hydrocarbons (PAH) collected from ambient air on quartz fiber filters and XAD-2 resin. Eight EPA medium volume samplers were set up to collect ambient air for 24 hours at a 6.7 cfm flow rate. Quartz fiber filters and XAD-2 resin were used to collect particulate-bound and vapor-phase PAHs. The results indicated that the levels of perdeuterated and native PAHs on the XAD-2 resin were not adversely influenced by the storage time.

AM	AMBIENT MONITORING
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB86-223096/XAB
Comparisons between MM5 (Modified Method 5), OM7 (Oregon Method 7), and Draft ASTM Measurements of Wood Stove Emissions
EPA, Research Triangle Park, NC, AEERL
Engineering-Science, Inc.
R.C. McCrillis, R.G. Merrill, P.R. Westlin, G.E. Weant, D.E. Wagoner
Jul 86, 20p, EPA-600/D-86-150, PC A02/MF A01

Abstract: The paper compares three candidate sampling methods--the EPA Modified Method 5 (MM5), the Oregon Method 7 (OM7), and the ASTM propsoed Method P180--preparatory to selecting a wood stove operating procedure and related emission sampling method. (NOTE: The EPA is developing a New Source Performance Standard for wood burning stoves. This is one of several issues to be resolved during the development process.) Five wood stoves (two catalytic, one noncatalytic generic, one noncatalytic high efficiency, and one catalytic fireplace insert) were tested. Results showed good correlations between the emission measurements obtained with each method.

CL-WOOD	WOOD SMOKE
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING

PB86-223195/XAB
Industrywide Studies Report of an Industrial Hygiene Survey at the Middletown Regional Hospital, Middletown, Ohio
National Institute of Occupational Safety and Health
May 86, 32p, IWS-152.16, PC A03/MF A01

Abstract: An in-depth industrial hygiene survey was conducted in the Central Services (CS) area of the Middletown Regional Hospital, Middletown, Ohio, on August 6-8, 1985. The survey was conducted to evaluate the occupational exposure of workers to ethylene oxide (EtO). EtO is used to sterilize heat sensitive medical supplies, and exposure to EtO may occur during the sterilization process. Recommendations concerning work practices and installation of engineering controls are offered which could reduce EtO exposure potential in the hospital.

CT	CONTROL TECHNOLOGY DOCUMENT
EA	EXPOSURE ASSESSMENT
IA	INDOOR AIR
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-21-8	ETHYLENE OXIDE
80	HEALTH SERVICES
806	HOSPITALS
8062	GENERAL MEDICAL & SURGICAL HOSPITALS

PB86-223336/XAB
Industrywide Studies Report of an Industrial Hygiene Survey at the Good Samaritan Hospital, Cincinnati, Ohio
National Institute of Occupational Safety and Health
Mar 86, 26p, IWS-152.14, PC A03/MF A01

Abstract: Environmental and breathing zone samples were analyzed for ethylene-oxide (75218) at Good Samaritan Hospital (SIC-8062), Cincinnati, Ohio in July, 1985. Engineering controls were inspected. Work practices were observed. Seven breathing zone time weighted average (TWA) ethylene-oxide concentrations and 6 short term concentrations were below the analytical limit of detection. Thirteen area TWA samples were also below the limit of detection. One area sample had an ethylene-oxide concentration of 0.5 part per million (ppm). The OSHA TWA standard for ethylene-oxide is 1 ppm. Short term (2 minute) samples ranged up to 131 ppm. Gloves were not used when transferring sterilized loads. The operator had to lean in toward the interior of the sterilizer to remove sterilized items. The mechanical access room for the sterilizer was under positive pressure. Engineering controls that reduced ethylene-oxide exposure potential included push/pull ventilation systems on sterilizers, dedicated building exhaust from the sterilizer area and double valve hook/up for the line connecting the ethylene-oxide cylinder and sterilizer. The authors conclude that personal breathing zone ethylene-oxide exposures did not exceed the OSHA standard. The basic ventilation design is one of the best seen to date.

CT	CONTROL TECHNOLOGY DOCUMENT
EA	EXPOSURE ASSESSMENT
IA	INDOOR AIR
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-21-8	ETHYLENE OXIDE
80	HEALTH SERVICES
806	HOSPITALS
8062	GENERAL MEDICAL & SURGICAL HOSPITALS

PB86-226396/XAB
National Air Toxics Information Clearinghouse: Ongoing Research and Regulatory Development Projects
EPA, Research Triange Park, NC, SASD
Radian Corp.
M.A. Bloomhardt, C.B. Brickley, and A.S. Pelland
Jun 86, 100p, EPA-450/5-86-007, PC A05/MF A01

Abstract: The purpose of the document is to inform State and local policy makers of current research and regulatory development projects underway at EPA and the National Institute of Occupational Safety and Health (NIOSH), and to help them identify sources of specific air toxics information. Every effort has been made to ensure accuracy as of March 1986, the date that compilation of information was completed. However, agency policies, priorities, and funding levels reflected by the projects listed in the document may change affecting estimated project completion dates and whether or not regulatory actions are finally taken.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-226958/XAB
Respiratory Effects of Portland Cement Dust
National Institute of Occupational Safety and Health
1985, 62p, PC A04/MF A01

Abstract: An epidemiologic study of the respiratory effects of Portland cement dust was conducted. The cohort consisted of 2,736 cement workers at 16 facilities in the United States. The comparisons consisted of 2,213 individuals in activities not involving dust exposure. Spirometry testing was performed. Respiratory symptom questionnaires were administered. Chest X-rays were taken and examined. Personal sampling for total and respirable dust, quartz (14808607), and oxides of sulfur and nitrogen was performed. Cement workers had a significantly elevated adjusted odds ratio for dyspnea, rounded and irregular small X-ray opacities, and pleural abnormalities. None of the ventilatory function variables were significantly different between cement workers and the comparisons. The authors conclude that cement dust exerts little adverse effect on respiratory symptoms and ventilatory function. To determine whether the increase in X-ray abnormalities represents pneumoconiosis or another pathological process would require histological study. There is insufficient evidence to suggest a change in the exposure limit for cement dust.

CL-PM	PARTICULATE MATTER
ES	EPIDEMIOLOGY STUDY
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
32	STONE, CLAY, AND GLASS PRODUCTS
324	CEMENT, HYDRAULIC
3241	CEMENT, HYDRAULIC

PB86-232212/REB
Health Assessment Document for Nickel and Nickel Compounds. Final Report
EPA, Research Triangle Park, NC, ECAO
S. Bayard, et al.
Sep 86, 462p, EPA-600/8-83-012FF, PC A20/MF A01

Abstract: The predominant atmospheric forms of nickel are as sulfate, oxides, and complex oxides. Nickel also occurs in ambient and drinking waters and soils. Routes of intake for man are inhalation, ingestion, and percutaneous absorption. Nickel exposure produces chronic dermatological, respiratory, endocrine and cardiovascular effects. Reproductive and developmental effects have been found in animals but not humans. Various nickel compounds have been tested for mutagenicity, demonstrating the ability of nickel compounds to produce geneotoxic effects; the translation of these effects into actual mutations is still not clearly understood. There is evidence both in humans and animals for the carcinogenicity of nickel in some forms. Lifetime cancer risks for continuous inhalation exposure at 1 microgram nickel/cu. m. have been estimated for nickel refinery dust and nickel subsulfide. There is growing evidence that nickel may be an essential element for humans.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7440-02-2	NICKEL

PB86-232857/REB
National Dioxin Study Tier 4 - Combustion Sources: Final Literature Review
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
M.H. Keating
Jun 86, 205p, EPA-450/4-84-0141, PC A10/MF A01

Abstract: The objective of Tier 4 of the National Dioxin Study is to determine if combustion sources emit significant amounts of chlorinated dibenzo-p-dioxins (CDD) and chlorinated dibenzofurans (CDF) to the atmosphere. An initial literature review was conducted during 1984 and published in October 1984 as "National Dioxin Study Tier 4 - Combustion Sources, Initial Literature Review and Testing Options," EPA-450/4-84-014b. The purpose of the report is to update the initial literature review. The document includes CDD/CDF emissions information available through July 1985. A tabular summary of the CDD/CDF emissions data base and a reference list of 250 citations are included.

CL-DIOXIN	DIOXINS
CL-PEST	PESTICIDES
EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
132-64-9	DIBENZOFURAN
262-12-4	DIBENZO-P-DIOXIN

PB86-233939/REB
Evaluation of Volatilization of Hazardous Constituents at Hazardous Waste Land Treatment Sites
EPA, Ada, OK, Kerr Lab.
R.R. Dupont, and J.A. Reineman
Aug 86, 169p, EPA-600/2-86-071, PC A08/MF A01

Abstract: Laboratory experiments were to measure the emission flux rates of seven volatile waste constituents: benzene, toluene, ethylbenzene, p-, m-, o-xylene, and naphthalene, from API Separatory Sludge and Slop Oil Emulsion Solids wastes in soil column and flask laboratory units. Emission flux rates were monitored as a function of waste application rate, application method (surface versus subsurface), soil type and soil physical characteristics. Field experiments were conducted at an active petroleum refinery land treatment site. Measured laboratory and field data were compared to the Thibodeaux-Hwang Air Emission Release Rate (AERR) model.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
100-41-4	ETHYL BENZENE
106-42-3	XYLENE,P-
108-38-3	XYLENE,M-
108-88-3	TOLUENE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
71-43-2	BENZENE
91-20-3	NAPHTHALENE
95-47-6	XYLENE,O-

PB86-235272/REB
Inorganic Arsenic Emissions from Glass Manufacturing Plants: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
May 86, 160p, EPA-450/3-83-011, PC A08/MF A01

Abstract: Standards to control emissions of inorganic arsenic from glass manufacturing plants are being promulgated under the authority of Section 112 of the Clean Air Act. The standard applies to new and existing glass manufacturing plants. The document contains a summary of public comments, EPA responses, and a discussion of differences between the proposed and promulgated standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB86-235843/REB
Inorganic Arsenic Emissions from Primary Copper Smelters and Arsenic Plants: Background Information for Promulgated Standards
EPA, Research Triangle Park, NC, OAQPS
May 86, 318p, EPA-450/3-83-010, PC A14/MF A01

Abstract: National emission standards to control inorganic arsenic from new and existing primary copper smelters and from arsenic trioxide and metallic arsenic production facilities are being promulgated under Section 112 of the Clean Air Act. Part 1 of the document contains a detailed summary of the public comments on the proposed standard for primary copper smelters, and Part 2 on the proposed standard for arsenic production facilities.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
7440-38-2	ARSENIC AND COMPOUNDS AS AS
7440-50-8	COPPER

PB86-237252/XAB
In-Depth Survey Report: Modified Control Technology for Ethylene Oxide Sterilization in Hospitals at Community Medcenter Hospital, Marion, Ohio
National Institute of Occupational Safety and Health
Jun 86, 41p, ECTB-146-12C, PC A03/MF A01

Abstract: Controls for ethylene-oxide (75218) (EtO) emitted from gas sterilization of medical items were evaluated at Community MedCenter Hospital (SIC-8062), Marion, Ohio, in October, 1985 after modifications to the system. Personal exposures and area concentrations were sampled with charcoal tubes, gas bags, or an infrared analyzer. Full shift exposures for the sterilizer operator were controlled to less than 0.05 parts per million (ppm) average with a combination of local exhaust ventilation at the emission sources, sterilizer cycle modifications, and work practices. Short term exposures during transfer of the load to the aerator had an average value of less than 0.22ppm versus 1.98ppm before controls were added. Employee exposures were less than the 5ppm ceiling limit which NIOSH has recommended not be achieved for more than 10 minutes in any workday. EtO was detected in front of the sterilizer during the purge cycle due to an unsealed drain connection and inadequate recess room exhaust. Temporarily sealing the drain controlled EtO emissions during purge.

CT	CONTROL TECHNOLOGY DOCUMENT
EA	EXPOSURE ASSESSMENT
IA	INDOOR AIR
NIOSH	NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
75-21-8	ETHYLENE OXIDE
80	HEALTH SERVICES
806	HOSPITALS
8062	GENERAL MEDICAL & SURGICAL HOSPITALS

PB86-238086/REB
Compiling Air Toxics Emission Inventories
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
T.F. Lahre, et al.
Jul 86, 361p, EPA-450/4-86-010, PC A16/MF A01

Abstract: The report contains technical materials that will assist state and local control agencies in compiling air toxics emission inventories. It contains a discussion of (1) various considerations that should be made in planning and beginning an inventory and (2) various tools an agency can use to locate potential sources and to estimate emissions therefrom. The appendices contain the data needed to use these inventory tools and some example applications of them.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB86-244878/REB
User's Guide for POSTZ: A Post-Processor for the SHORTZ Air Quality Model
EPA, Seattle, WA, Region X
TRC Environmental Consultants, Inc.
K.D. Winges
Jul 86, 98p, EPA-910/9-86-144, PC A04/MF A01

Abstract: The report provides instructions for the use of the POSTZ computer program, a post-processor for the SHORTZ air quality model. The POSTZ program is designed to read a sequential output tape of concentrations produced by the SHORTZ model. The POSTZ program provides summary tables of the highest concentrations for different averaging times. The POSTZ program allows the user to restrict the analysis to specific receptors, sources or periods of meteorological data. In addition, the user can scale the concentrations from a particular source if desired. The user can select between running or block averages, and can implement the EPA calms policy if desired. The output tables can be in the form of the highest five concentrations for each receptor, the top 50 concentrations for all receptors, or all concentrations computed to be above a user specified criteria value.

DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB86-245255/REB
Inorganic Arsenic Risk Assessment for Primary and Secondary Lead Smelters, Primary Zinc Smelters, Zinc Oxide Plants, Cotton Gins, and Arsenic Chemical Plants
EPA, Research Triangle Park, NC, SASD
Apr 85, 101p, EPA-450/5-85-002, PC A06/MF A01

Abstract: The document contains the quantative expressions of public cancer risks for 6 inorganic arsenic source categories. For primary and secondary lead smelters, primary zinc smelters, zinc oxide plants, cotton gins and arsenic chemical plants, numerical expressions are presented of public exposure to ambient air concentrations of inorganic arsenic estimated to be caused by emissions from stationary sources. In addition, a dose-response model is outlined that numerically relates the degree of exposure to airborne inorganic arsenic to the risk of getting lung cancer.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
RA	RISK ASSESSMENT
07	AGRICULTURAL SERVICES
072	CROP SERVICES
0724	COTTON GINNING
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
32	STONE, CLAY, AND GLASS PRODUCTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3332	PRIMARY LEAD
3333	PRIMARY ZINC
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB86-246295/REB
Inorganic Arsenic NESHAPS: Response to Public Comments on Health, Risk Assessment, and Risk Management
EPA, Research Triangle Park, NC, OAQPS
Apr 85, 223p, EPA-450/5-85-001, PC A10/MF A01

Abstract: The document contains detailed responses to public comments received from the US EPA's proposal to regulate inorganic arsenic emmissions from primary copper smelters and glass manufacturing plants. In particular, responses to issues regarding health effects associated with inorganic arsenic exposure, the assessment of public risk and the management of risk information are included.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
7440-38-2	ARSENIC AND COMPOUNDS AS AS

PB86-250266
Asbestos Exposure Assessment in Buildings. Inspection Manual
EPA, Kansas City, MO, Region VII
W. Brandner
Oct. 82, 79p, EPA/907/9-82/009, PC A05/MF A01

Abstract: This manual describes procedures for inspecting buildings for friable, asbestos-containing materials and evaluating the hazard of being exposed to such materials. A method of numerically grading eight factors and using numerical scores to set abatement priorities is presented.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
1332-21-4	ASBESTOS
82	EDUCATIONAL SERVICES
821	ELEMENTARY AND SECONDARY SCHOOLS
8211	ELEMENTARY AND SECONDARY SCHOOLS

PB87-101234/XAB
Destruction of Chlorinated Hydrocarbons by Catalytic Oxidation
EPA, Research Triangle Park, NC, AEERL
Radian Corp.
M.A. Palazzolo, et al.
Sep 86, 154p, EPA-600/2-86-079, PC A08/MF A01

Abstract: The report gives results of a determination of the effectiveness of catalytic oxidation for destroying vapor-phase chlorinated hydrocarbons. The study was conducted on two pilot-scale catalytic incinerators: one employed a metal oxide catalyst in a fluidized-bed configuration; and the other, a fixed-bed proprietary catalyst, supplemented with ultraviolet (UV) light and ozone injection. Both systems were tested under a variety of temperature and space velocities. The test vapor streams consisted of low concentrations (3-200 ppmv) of mixtures of organic compounds, and included three streams that represented emissions from air strippers used to treat contaminated groundwater at U.S. Air Force bases. Study results showed that the fluidized-bed catalytic incinerator was capable of achieving total organic destruction efficiencies of greater than 98%. The UV/ozone catalytic incinerator failed to achieve high destruction efficiencies: with ozone injection, total destruction was 75%; and without ozone, the maximum destruction efficiency was 64%.

CL-CHC	CHLORINATED HYDROCARBONS
CL-HCARB	HYDROCARBONS
CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB87-102497/XAB
EPA (Environmental Protection Agency) Complex Terrain Model: Theoretical Basis and Preliminary Evaluation
EPA, Research Triangle Park, NC, ESRL
S.G. Perry, F.A. Schiermeier
Sep 86, 23p, EPA-600/D-86-218, PC A02/MF A01

Abstract: The theoretical basis, physical structure; and preliminary evaluation of the U.S. Environmental Protection Agency's Complex Terrain Dispersion Model (CTDM) are described. CTDM is a point-source plume model designed primarily to estimate windward-side surface concentrations on distinct terrain features during stably-stratified flow. The model is based on steady-state, Gaussian diffusion assumptions. Potential flow theory is the basis of the model mechanisms for accounting for terrain-induced alterations in the flow. The model incorporates the critical dividing streamline height concept to separate the flow capable of surmounting the terrain from that restrained to flow around the terrain. Consideration is given to plume meander, source-induced effects on initial diffusion, and alterations in diffusion rates by flow deformation. Preliminary evaluations of the current version of the model with field tracer data and fluid modeling data show that CTDM can identify maximum concentrations with some success but that further refinements are warranted.

DM DISPERSION MODELING
EPA ENVIRONMENTAL PROTECTION AGENCY

PB87-104527/XAB
Current Intelligence Bulletin 47, 4,4'-Methylenedianiline (MDA) (Revised)
National Institute of Occupational Safety and Health
Jul 86, 26p, PC A03/MF A01, NIOSH PUB No. 86-115, AVAIL NIOSH

Abstract: Wistar rats receiving a single injection of 2,2'-dihydroxy-N-nitrosodipro pylamine (a tumor initiator) followed by 4,4'-methylenedianiline (MDA) in the diet for 19 weeks, developed thyroid follicular cell carcinomas and follicular cell and papillary adenomas. Fischer 344/N rats and B6C3F1 mice receiving MDA as 4,4'-methylenedianiline dihydrochloride ad libitum in drinking water for two years developed thyroid follicular cell carcinomas and adenomas, C-cell adenomas of the thyroid, hepatocellular carcinomas and adenomas, alveolar bronchiolar adenomas, malignant lymphomas, and benign tumors of the adrenal gland. Workers with airborne and dermal exposure to powdered MDA have developed toxic hepatitis. In addition, increased incidences of cancers of the bladder and large intestine and of lymphosarcoma and reticulosarcoma have been reported in workers with potential exposure to MDA.

HA HEALTH ASSESSMENT
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
TT TOXICITY TESTING
101-77-9 METHYLENEDIANILINE,4,4'-

PB87-113882/XAB
Vinyl Chloride Standards: Responses to Comments on January 1985 Proposed Revisions
EPA, Research Triangle Park, NC, OAQPS
Sep 86, 84p, EPA-450/3-86-004, PC A05/MF A01

The document summarizes and responds to comments on the proposed revisions to the vinyl chloride standard set under Section 112 of the Clean Air Act.

EPA ENVIRONMENTAL PROTECTION AGENCY
NESHAP NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
75-01-4 VINYL CHLORIDE

PB87-113973/XAB
Locating and Estimating Air Emissions from Sources of Ethylene Oxide
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Sep 86, 80p, EPA-450/4-84-0071, PC A05/MF A01

Abstract: To assist groups interested in inventorying air emissions of various potentially toxic substances, EPA is preparing a series of documents such as this to compile available information on sources and emissions of these substances. The document deals specifically with Ethylene Oxide. Its intended audience includes Federal, State and local air pollution personnel and others interested in locating potential emitters of Ethylene Oxide and in making gross estimates of air emissions therefrom. The document presents information on (1) the types of sources that may emit Ethylene Oxide, (2) process variations and release points that may be expected within these sources, and (3) available emissions information indicating the potential for Ethylene Oxide release into the air from each operation.

EF	EMISSION FACTOR
EPA	ENVIRONMENTAL PROTECTION AGENCY
75-21-8	ETHYLENE OXIDE

PB87-114443
Toxicology and Carcinogenesis Studies of 1,2-Dichloropropane (Propylene Dichloride) (CAS No. 78-87-5)
NTP, Research Triangle Park, NC
Aug 86, 177p, NCI/NTP TR-263, PC A09/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
78-87-5	DICHLOROPROPANE,1,2-

PB87-117420/XAB
Health Assessment Document for Hydrogen Sulfide
EPA, Washington, DC, OHEA
H.M. Ammann, et al.
Aug 86, 96p, EPA-600/8-86-026A, PC A05/MF A01

Abstract: Hydrogen sulfide is a highly toxic gas which is immediately lethal in concentrations greater than 2000 ppm. The toxic end-point is due to anoxia to brain and heart tissues which results from its interaction with the celluar enzyme cytochrome oxidase. Inhibition of the enzyme halts oxidative metabolism which is the primary energy source for cells. A second toxic end-point is the irritative effect of hydrogen sulfide on mucous membranes, particularly edema at sub-lethal doses (250 to 500 ppm) in which sufficient exposure occurs before conciousness is lost. Recovered victims of exposure report neurologic symptoms such as headache, fatigue, irritability, vertigo, and loss of libido. Long-term effects are similar to those caused by anoxia due to other toxic agents like CO, and probably ae not due to specific H2S effects. H2S is not a cumulative poison. No meutagenic, carcinogenic, reproductive or teratogenic effects have been reported in the literature.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
7783-06-4	HYDROGEN SULFIDE

PB87-124079/XAB
National Air Toxics Information Clearinghouse: Methods for Pollutant Selection and Prioritization
EPA, Research Triangle Park, NC, OAQPS
Radian Corp.
Jul 86, 74p, EPA-450/5-86-010, PC A04/MF A01

Abstract: The purpose of the report is to describe various methodologies for selecting and prioritizing substances of concern within an air toxics program. The report is aimed at helping State and local agencies in selecting sustances for review and choosing an existing system or creating a system to prioritize substances. Information on the pollutant selection methodologies described was provided by several State and local agencies as well as by EPA. The prioritization methodologies presented were developed by State and local agencies, EPA, and other Federal agencies.

EPA	ENVIRONMENTAL PROTECTION AGENCY
RDG	REG DEVELOPMNT GUIDE

PB87-125779/XAB
National Air Toxics Information Clearinghouse: NATICH Data Base Report on State and Local Agency Air Toxics Activities, July 1986. Volumes 1 and 2
EPA, Research Triangle Park, NC
Radian Corp.
Jul 86, 862p, EPA-450/5-86-011A;EPA-450/5-86-011B, PC A99/MF E04

Abstract: The purpose of the report is to disseminate information provided to the NATICH data base by State and local air agencies on their air toxics activities. The computer-generated report supersedes manually- and computer-prepared interim reports published in September 1984, March 1985, and September 1985. It both updates and extends (in new tables) the information in the first three reports and contains information received through April 1986. The report includes a listing of State and local agencies that have provided information to the Clearinghouse, air toxics contacts, acceptable ambient concentrations and standards and the basis for those concentrations/standards; and information on regulatory programs, pollutant research, methods development activities, permitting, source testing, ambient monitoring, emissions inventory, risk assessment, and State/local bibliographies.

EPA ENVIRONMENTAL PROTECTION AGENCY
RDG REG DEVELOPMNT GUIDE

PB87-125969/XAB
Mortality Among Workers Exposed to Cutting Fluids and Abrasives: Bearing Plant 1
National Institute of Occupational Safety and Health
Sep 84, 72p, PC A04/MF A01

Abstract: A survey of mortality among United Automobile Union workers exposed to cutting fluids and abrasives was conducted. The cohort consisted of all hourly employees with 10 or more years of service who died from January 1, 1969 to July 31, 1982. A total of 702 death certificates and job histories of 768 employees were reviewed. Data was obtained from company and union records. Standardized proportional mortality ratios (PMR) were computed. Significant excesses of mortality from rectal cancer (PMR at 3.04), stomach cancer (PMR at 1.98), and stroke (PMR at 1.35) were found. A 25 percent elevation in mortality for lung cancer (PMR at 1.25) occurred among white males. Among females employed as grinders, the PMR for lung cancer was 2.8. A statistically significant correlation between stomach cancer and grinding exposure occurred. The grinding exposures consisted primarily of aerosols from soluble oil and oil based metal working fluids. The authors note that the pattern of stomach cancer suggests a correlation with water based cutting fluids.

CL-ABRAS ABRASIVES
CL-CUTFLU CUTTING FLUIDS
ES EPIDEMIOLOGY STUDY
NIOSH NATIONAL INSTITUTE FOR OCCUP. SAFETY AND HEALTH
35 MACHINERY, EXCEPT ELECTRICAL
356 GENERAL INDUSTRIAL MACHINERY
3562 BALL AND ROLLER BEARINGS

PB87-129524/XAB
Pilot Study of Sampling and Analysis for Polynuclear Aromatic Compounds in Indoor Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Div.
J.C. Chuang, et al.
Dec 86, 223p, EPA-600/4-86-036, PC A10/MF A01

Abstract: The report presents the results of a nine-home indoor air study that the authors performed in Columbus, Ohio in the winter of 1984. The main objective of the study was the field evaluation of sampling and analysis methodology. However, several additional results of the study are interesting and useful, including the finding of polynuclear aromatic hydrocarbons (PAH) at levels from 0.000 to 143 ng/cu m in residences, strong correlations of these levels with smoking by occupants, little influence of fireplace use on the PAH levels, the identification of quinoline as a potential marker for cigarette smoking, and measurement of 2- and 3-nitrofluoranthene, which are potent mutagens, at significant levels from 0.000 to 0.185 ng/cu m, also correlated with smoking.

CL-IAP	INDOOR AIR POLLUTANTS
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
IA	INDOOR AIR
91-22-5	QUINOLINE

PB87-129730/XAB
Ambient Air/Source Transport and Transformation Relationships for Selected Hazardous Air Pollutants
EPA, Research Triangle Park, NC, ASRL
R.L. Brewer, et al.
Nov 86, 309p, EPA-600/3-86-063, PC A14/MF A01

Abstract: The study was undertaken with the goal of obtaining information that could improve modeling technique for hazardous organic vapors in the atmosphere. It was proposed that both source receptor and dispersion models be applied. Detailed examination of alternative choices for pollutant emission site and method of determination was made. The benzene class as pollutants, a waste disposal site near Taft, California (in the San Joaquin Valley) as source, and Tenax adsorption from the air, followed by thermal desorption and gas chromatography as method of determination, were selected. A combination of poor meteorological conditions, inadequate sample collection and contribution from other unidentified organic source prevented the determination of suitable modeling determination. Conclusions and recommendation for future sampling studies are included.

AM	AMBIENT MONITORING
CL-VOC	VOLATILE ORGANIC COMPOUNDS
DM	DISPERSION MODELING
EPA	ENVIRONMENTAL PROTECTION AGENCY
71-43-2	BENZENE

PB87-129805/XAB
Evaluation of an EPA (Environmental Protection Agency) High-Volume Air Sampler for Polychlorinated Dibenzo-P-Dioxins and Polychlorinated Dibenzofurans
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Div.
F.L. DeRoos, J.E. Tabor, S.E. Miller, S.C. Watson, J.A. Hatchel
Dec 86, 36p, EPA-600/4-86-037, PC A04/MF A01

Abstract: A high-volume air sampler was evaluated for collection of polychlorinated dibenzo-p-dioxins (PCDD) and polychlorinated dibenzofurans (PCDF). The sampler consists of a filter, polyurethane foam adsorbent cartridge, air pump, and environmental housing. The use of an alternative adsorbent, silica gel, was also studied. The study was carried out using 1,2,3,4-tetra-chlorodibenzo-p-dioxin, 1,2,4,8-tetrachlorodibenzofuran, 1,2,3,4,7,8-hexachlorodibenzo-p-dioxin, 1,2,3,6,7,8-hexachlorodibenzofuran, octa chlorodibenzo-p-dioxin, and octa chlorodibenzofuran, the overall average retention efficiency for all of the isomers at two concentration levels was 99 percent for both the PUF and the silica gel adsorbents. The desorption efficiency of the PCDD/PCDF isomers from spiked filters was evaluated to assess the extent of migration of these compounds from the filter to the adsorbent. Migration was dependent upon the isomers' chlorination level with the less chlorinated, more volatile isomers generally desorbing more efficiently.

CL-DIOXIN	DIOXINS
CL-FURAN	FURANS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
30746-58-8	TETRACHLORODIBENZODIOXIN,1,2,3,4-,P-

PB87-129979/XAB
Comparison of Polyurethane Foam and XAD-2 Resin as Collection Media for Polynuclear Aromatic Hydrocarbons in Air
EPA, Research Triangle Park, NC, EMSL
Battelle Columbus Div.
J.C. Chuang, S.W. Hannan, J.R. Koetz
Dec 86, 35p, EPA-600/4-86-034, PC A03/MF A01

Abstract: The objective of the project was to evaluate the collection and retention efficiency for polynuclear aromatic hydrocarbon (PAH) adsorbed or spiked on polyurethane (PUF) and XAD-2 cartridges, and to compare the effect of sampling temperature on retention efficiency for PAH spiked on PUF and XAD-2 resin cartridges. It appeared that XAD-2 resin has better collection efficiency for volatile 2-ring PAH than does the PUF. In addition, some spiked volatile and reactive PAH were well retained on XAD-2 resin, whereas only a small portion of these compounds is retained on PUF after exposure to ambient air at a 6.7 cfm flow rate for 24 hours. The retention efficiency for volatile PAH can be improved by lowering sampling temperature. However, the retention efficiency for reactive PAH such as cyclopenta(c,d) pyrene cannot be improved at lower sampling temperature. The losses of cyclopenta(c,d) pyrene are not through volatilization but are due to the reactivity of the compound.

AM	AMBIENT MONITORING
CL-PAH	POLYCYCLIC AROMATIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB87-131637/XAB
Review of New Source Performance Standards for Primary Aluminum Reduction Plants
EPA, Research Triangle Park, NC, OAQPS
Sep 86, 121p, EPA-450/3-86-010, PC A06/MF A01

Abstract: As required by Section 111 (b) of the Clean Air Act, as amended, a four year review of the new source performance standards for primary aluminum reduction plants (40 CFR Subpart S) was conducted. The report presents a summary of the current standards, the status of current applicable control technology, and the ability of plants to meet the standards. No revision to the standards are recommended, but EPA should make available a procedure upon which a decision to reduce the frequency of secondary monitoring can be made.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3334	PRIMARY ALUMINUM
7429-90-5	ALUMINUM

PB87-132858/XAB
Evaluation of Photovac 10S50 Portable Photoionization Gas Chromatograph for Analysis of Toxic Organic Pollutants in Ambient Air
EPA, Las Vegas, NV, EMSL
R.E. Berkley
Dec 86, 51p, EPA-600/4-86-041, PC A04/MF A01

Abstract: The objective of the study was to evaluate the Photovac 10S50 portable photoionization gas chromatograph as a monitor for fourteen selected toxic organic vapors in ambient air. These included benzene, toluene, bromo- and chloro-benzene, o-xylene, and nine halomethanes, ethanes, and ethylenes. Such analyses have usually been done by gas chromatography using a mass spectrometer as detector (GC/MS). The procedure is inefficient in collection and delivery of analytes to the GC/MS system and limits GC/MS analysis of organic vapors in air to being a semiquantitative method which may produce misleading results. A portable chromatograph with a detector sensitive enough to detect pollutants without preconcentration could avoid these shortcomings and supplement or complement data obtained by preconcentration/GC/MS.

AM	AMBIENT MONITORING
CL-HALOME	HALOMETHANES
CL-ORGANIC	ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
108-86-1	BROMOBENZENE
108-88-3	TOLUENE
108-90-70	CHLOROBENZENE
71-43-2	BENZENE

PB87-133278
Toxicology and Carcinogenesis Studies of Amosite Asbestos (CAS No. 12172-73-5)
NTP, Research Triangle Park, NC
Nov 83, 81p, NCI/NTP TR-249, PC A05/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING

PB87-136966/XAB
Review of New Source Performance Standards for Petroleum Refinery Fuel Gas
EPA, Research Triangle Park, NC, OAQPS
Oct 86, 92p, EPA-450/3-86-011, PC A05/MF A01

Abstract: As required by Section 111(b) of the Clean Air Act, as amended, a four year review of the new source performance standards for petroleum refineries (40 CFR Subpart J) was conducted. The review was limited to the sulfur dioxide standard as applied to refinery fuel gas. The report presents a summary of the current standard, the status of current applicable control technology, and the ability of plants to meet the standard. No revision to the standard is recommended; however, EPA should investigate an alternative method of continuously measuring the sulfur concentration of refinery fuel gas.

EPA	ENVIRONMENTAL PROTECTION AGENCY
NSPS	NEW SOURCE PERFORMANCE STANDARD
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
299	MISC. PETROLEUM AND COAL PRODUCTS
7446-09-5	SULFUR DIOXIDE

PB87-139960/XAB
Health Assessment Document for Acrolein. External Review Draft
EPA, Washington, DC, OHEA
A. Chiu, et al.
Sep 86, 122p, EPA-600/8-86-014A, PC A06/MF A01

Abstract: Acrolein is an unsaturated aldehyde which is highly toxic by the inhalation and oral routes and is a strong irritant. The reactivity and toxicity of acrolein is seen at the principal sites of exposure, the gastrointestinal and pulmonary tracts. There is no evidence that below aversive levels, acrolein enters the general circulation. Acrolein is metabolized by liver and lung; metabolism is the principal route of elimination. There is inadequate evidence for acrolein's mutagenicity or chemical interaction with mammaliam germ cells. Animal evidence for carcinogenicity is limited. There is no epidemiological data. Acrolein can produce both embryotoxic and fetotoxic effects, and it is teratogenic under certain conditions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
107-02-8	ACROLEIN

PB87-140463/XAB
NBS/EPA (National Bureau of Standards/Environmental Protection Agency) Certified Reference Material Performance Audit Program: Status Report 2
EPA, Research Triangle Park, NC, EMSL
Research Triangle Inst.
R.S. Wright, W.C. Eaton, C.E. Decker
Oct 86, 45p, EPA-600/4-86-045, PC A03/MF A01

Abstract: A traceability procedure has been established which allows specialty gas producers to prepare gaseous pollutant Certified Reference Materials (CRM's). The accuracy, stability and homogeneity of the CRM's approach those of NBS Standard Reference Materials (SRM's). As of October 1986, 36 candidate batches had been audited. In general, the agreement between the producer's analytical results and the audit results have been within + or - 0.5% relative. Additional data suggest that CRM's are stable during their two-year certification periods. The purchaser of a CRM is assured that its accuracy is high because of four features of the CRM program: (1) The general technical procedure for producing and analyzing CRM's; (2) CRM's are directly traceable to SRM's which are used as reference standards during the analysis of CRM's; (3) The producer's analytical results are verified by measurements which are performed by an independent auditor; and (4) Both the producer's and the auditor's analytical results must be reviewed and approved by NBS before the CRM's may be sold.

EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB87-141460/XAB
Stability of Parts-Per-Million Organic Cylinder Gases and Results of Source Test Analysis Audits: Status Report 8
EPA, Research Triangle Park, NC, EMSL
Research Triangle Inst.
G.B. Howe, R.K.M. Jayanty, C.E. Decker
Jan 87, 93p, EPA-600/2-86-117, PC A05/MF A01

Abstract: A repository of 45 gaseous compounds including hydrocarbons, halocarbon, and sulfur species has been established under contract with the U.S. Environmental Protection Agency (USEPA). The main objectives of this on-going project are (1) to provide gas mixtures to EPA, state/local agencies, or their contractors, as peformance audits to assess the accuracy of source emission measurements in certain organic chemical manufacturing industries, (2) to corroborate the vendor's certified analysis of the gas mixtures by in-house analysis, (3) to determine the stability of the gas mixtures with time by in-house analysis, and (4) to explore the feasibility of new audit materials as requested by EPA.

CL-HCARB HYDROCARBONS
CL-ORGANIC ORGANIC COMPOUNDS
EPA ENVIRONMENTAL PROTECTION AGENCY
SA SOURCE ASSESSMENT

PB87-145355/XAB
Field Evaluation of Methodology for Measurement of Cadmium in Stationary Source Stack Gases
EPA, Research Triangle Park, EMSL
Radian Corp.
R.F. Hoseman, D.B. Bath, J.R. McReynolds, D.J. Holder, A.L. Sykes
Dec 86, 133p, EPA-600/4-86-048, PC A07/MF A01

Abstract: A laboratory and field evaluation study was done to develop methodology for the measurement of cadmium in stationary source stack emissions. Field evaluations were performed at a municipal solid waste incinerator and a sewage sludge incinerator. The methodology was tested through the laboratory and field sampling validation phases to evaluate precision and accuracy of the proposed method. Colocated, quadruplicate flue gas samples of nominally 30 and 60 dscf in 1 and 2 hours sampling time were collected to assure an adequate cadmium content, a representative sample, and the production of data to validate the method in terms of between-train precision. The overall accuracy and precision of the analysis procedure were 89.2 percent and 1.7 percent, respectively. The detection limit of the atomic absorption instrument was 0.03 ug/mL. The methodology proved to be a reliable sampling approach to determine cadmium emissions from the stationary sources tested.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7440-43-9	CADMIUM

PB87-145447/XAB
Precision and Accuracy Assessments for State and Local Air Monitoring Networks, 1985
EPA, Research Triangle Park, NC, EMSL
R.C. Rhodes, E.G. Evans Jan 87, 257p, EPA-600/4-87-003, PC A12/MF A01

Abstract: Precision and accuracy data obtained from State and local agencies during 1985 are summarized and evaluated. Some comparisons are made with the results reported for prior years to determine any trends. Some trends indicated continued improvement in the completeness of reporting of precision and accuracy data. The national summaries indicate a further improvement in the precision and accuracy assessments of the pollutant monitoring data collected. The annual results from each reporting organization are given so that comparisons may be made from year to year and alos with other reporting organizations. A comparison of the precision and accuracy data from the Precision and Accuracy Reporting System with those from the independent performance audit program conducted by the Environmental Monitoring Systems Laboratory is given.

AM	AMBIENT MONITORING
EPA	ENVIRONMENTAL PROTECTION AGENCY

PB87-145934/XAB
Laboratory and Field Evaluation of the Semi-Vost (Semi-Volatile Organic Sampling Train) Method
EPA, Research Triangel Park, EMSL
Radian Corp.
J. Bursey, J. Steger, M. Palazzolo, D. Benson, J. Homolya
Jan 87, 358p, EPA-600/4-86-046, PC A16/MF A01

Abstract: Laboratory studies and a second field evaluation have been completed to assess the performance of the Semi-Volatile Organic Sampling Train (Semi-VOST) method for measuring concentrations of principal organic hazardous constituents (POHCs) with boiling points greater than 100 deg C emitted from hazardous waste incineration. The Semi-VOST methodology was tested initially through a series of laboratory experiements and a field test at a hazardous waste incinerator. In the first field test method precision and bias were shown to be compound specific. The second field test was performed at a hazardous waste incinerator using five gaseous deuterated compounds to dynamically spike four simultaneously operating Semi-VOST trains. Toluene, 1,1,2,2-tetrachloroethane, and chlorobenzene were chosen because of boiling point and chemical functionality.

CL-SVOC	SEMIVOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
108-88-3	TOLUENE
108-90-7	MONOCHLOROBENZENE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
79-34-5	TETRACHLOROETHANE,1,1,2,2-

PB87-146742
Toxicology and Carcinogenesis Studies of Methyl Methacrylate (CAS No. 80-62-6)
NTP, Research Triangle Park, NC
Oct 86, 189p, NCI/NTP TR-314, PC A09/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
80-62-6	METHYL METHACRYLATE

PB87-147039/XAB
Health Assessment Document for Phosgene, External Review Draft
EPA, Washington, DC, OHEA
N.P. Hajjar et al.
Aug 86, 121p, EPA-600/8-86-022A, PC A06/MF A01

Abstract: Phosgene is primarily manufactured for the synthesis of isocyanate-based polymers, carbonic acid esters, and acid chlorides. Ambient and indoor air concentrations of phosgene are produced by direct emissions during its manufacture, handling, and use; thermal decomposition of chlorinated hydrocarbons; and photochemical oxidation of chloroethylenes in the air. The effects of acute inhalation exposure are primarily respiratory, causing pulmonary emphysema, pulmonary adema, and possibly death due to paralysis of the respiratory center as a result of anoxia. Limited epidemiology studies indicate no increase in the incidence of cancers among workers chronically exposed to phosgene. No definitive conclusions can be drawn regarding possible teratogenic, reproductive, carcinogenic, or mutagenic effects of phosgene exposure because adequate studies have not been performed.

EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
75-44-5	PHOSGENE

PB87-147054
Toxicology and Carcinogenesis Studies of Tetrachloroethylene (CAS No. 127-18-4)
NTP, Research Triangle Park, NC
Aug 86, 190p, NCI/NTP TR-311, PC A09/MF A01

Abstract: Toxicological studies and carcinogenic bioassays for the chemical(s) mentioned were performed on a species of laboratory animal. Results and test conditions are described.

HA	HEALTH ASSESSMENT
NTP	NATIONAL TOXICOLOGY PROGRAM
TT	TOXICITY TESTING
127-18-4	TETRACHLOROETHYLENE

PB87-166583
EAB Control Cost Manual, 3rd Edition
EPA, Research Triangle Park, NC, OAQPS
Feb 1987, 96p, EPA 450/5-87-001A

Abstract: The purpose of this manual is: (1) to compile up-to-date capital costs, operating and maintenance expenses, and other costs for "add-on" air pollution control systems and (2) to provide a comprehensive, consistent, and easy-to-use procedure for estimating and (where appropriate) escalating these costs. This third edition includes a thorough discussion of estimating methodology and detailed design procedures for a set of equipment types. The appendices have been revised to include materials on compound interest factors, equipment cost indices, and control equipment vendors.

CT	CONTROL TECHNOLOGY DOCUMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY

PL 1985 C.403
Toxic Catastrophe Prevention Act - State of New Jersey
State of New Jersey
Jan 86, 11p., PL 1985 C.403

Abstract: Public law signed January 8, 1986 establishing regulations concerning the manufacture and distribution of eleven toxic compounds.

ER	ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES
RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY
107-05-1	CHLOROPROPENE,3-
584-84-9	TOLUENE,24,DIISOCYANATE
624-83-9	METHYL ISOCYANATE
74-90-8	HYDROGEN CYANIDE
75-44-5	PHOSGENE
7644-39-3	DIMETHOXYETHANE,1,2-
7647-01-0	HYDROGEN CHLORIDE
7719-12-2	PHOSPHOROUS TRICHLORIDE
7726-95-6	BROMINE
7782-50-5	CHLORINE
7783-06-4	HYDROGEN SULFIDE

PUB-ON-DEMAND-1
A Study of Herbicides and Birth Defects in the Republic of Vietnam
National Academy of Sciences
1982, 77 p., $11.50

Abstract Not Available

CL-PEST	PESTICIDES
HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES

PUB-ON-DEMAND-2
Possible Long-Term Health Effects of Short-Term Exposure to Chemical Agents, Vol 2: Cholinesterase Reactivators, Psychochemicals and Irritants and Vesicants
National Academy of Sciences
1984, 351p, $28.00

Abstract: No abstract available.

HA	HEALTH ASSESSMENT
NAS	NATIONAL ACADEMY OF SCIENCES
97	NATIONAL SECURITY AND INTL. AFFAIRS
971	NATIONAL SECURITY

PUB-ON-DEMAND-3
Risk Assessment in the Federal Government: Managing the Process Working Papers
National Academy of Sciences
1983, 128p, $14.50

Abstract: This volume contains the collected working papers of the Committee on the Institutional Means for Assessment of Risks to Public Health. It is a companion volume to Risk Assessment in the Federal Government: Managing the Process. See ISBN 0-309-03349-7.

NAS	NATIONAL ACADEMY OF SCIENCES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

R10187001
GUIDELINES FOR AIR QUALITY MODELLING FOR AIR TOXICS SOURCES
RI DEPT OF ENV. MGMT., DIV. OF AIR & HAZ. MATERIALS
05/26/87, 20 pages

SD0184002
RADON-222 CONCENTRATIONS IN WIND CAVE NATIONAL PARK AND JEWEL CAVE NATIONAL MONUMENT
SD DEPT. OF WATER & NAT. RES., OFFICE OF AIR QUALITY
R. F. BRICH
D. C. WARD
01/01/84, 13 pages

THIS STUDY WAS CONDUCTED TO COMPLIMENT THE EXISTING DATA BASE ON UNDER GROUND EXPOSURES TO NATURALLY OCCURING RADON CONCENTRATIONS. AS EXPECTED, RADON CONCENTRATIONS WERE THE GREATEST IN THE DEEPER CAVE SECTIONS IN COMPARISON TO AMBIENT AND NEAR-SURFACE MEASUREMENTS. WIND CAVE FIT THE PROTOTYPE FOR SEASONAL CONCENTRATIONS (I.E.-ELEVATED CONC IN SUMMER AND LOWER CONC IN THE WINTER). JEWEL CAVES SHOWED THE OPPOSITE PATTERN. THIS MAY BE DUE TO IN PART TO INCREASED USE OF THE ELEVATOR DURING THE VISITOR SEASON INCREASING THE AIR FLOW.

IA INDOOR AIR
STATE/LOC STATE OR LOCAL AGENCY

SD0185001
RADON-222 AND DAUGHTER CONCENTRATIONS IN CONVENTIONALLY CONSTRUCTED AND ENERGY EFFICIENT STRUCTURES IN SOUTH DAKOTA
SD DEPT. OF WATER & NAT. RES., OFFICE OF AIR QUALITY
R. F. BRICH
D. C. WARD
01/01/85, 20 pages

THIS STUDY COMPARED RADON LEVELS IN CONVENTIONALLY BUILT HOMES AND ENERGY EFFICIENT STRUCTURES IN SOUTH DAKOTA BETWEEN NOVEMBER 1982 AND DECEMBER 1984. CONVENTIONAL HOMES AND OLDER HOMES WITH TYPICAL AMOUNTS OF INSULATION, COUPLED WITH AIR EXCHANGE RATES THAT ARE PROBABLY GREATER THAN 1.5 PER HOUR, PRESENT RADON RISKS THAT ARE WITHIN ACCEPTABLE HEALTH LIMITS WITH FEW EXCEPTIONS. ELEVATED RADON LEVELS WERE FOUND IN NEARLY ALL ENERGY EFFICIENT STRUCTURES. THIS IS A DIRECT RESULT OF AIR TIGHTNESS DUE TO INCREASED INSULATION. ALSO, WITH EARTH SHELTERED HOMES THE INCREASED SOIL CONTACT OVER THE HOME PRODUCES A GREATER SURFACE AREA FOR RADON TO MIGRATE INTO THE INTERIOR OF THE HOUSE.

IA INDOOR AIR
STATE/LOC STATE OR LOCAL AGENCY

TN0201
TOXIC AIR POLLUTANT SOURCE IDENTIFICATION IN THE PINEY WOODS COMMUNITY
CHATTANOOGA-HAMILTON CO. AIR POLLUTION CONTROL BUREAU
R. J. GOODWIN, N. T. LEE, J. W. CROPP
03/01/87, 15 pages

AMBIENT CONCENTRATIONS OF 23 PRESELECTED VOLATILE ORGANIC COMPOUNDS AND 5 CRITERIA AIR POLLUTANTS WERE MONITORED IN THE PINEY WOODS COMMUNITY IN CHATTANOOGA, TN. PINEY WOODS IS AN URBAN RESIDENTIAL AREA SURROUNDED BY INDUSTRIES EMITTING A VARIETY OF AIR POLLUTANTS. DATA FOR 8 DAYS FROM JANUARY THROUGH MARCH 1986 WERE EXAMINED IN CONJUNCTION WITH ONSITE WIND DATA AND A POINT SOURCE EMISSION INVENTORY TO EXPLORE RELATIONSHIPS BETWEEN AMBIENT CONCENTRATIONS AND DIRECTIONS TO POINT SOURCES. THIS STUDY WAS LIMITED TO THE MOST FREQUENTLY OCCURRING VOLATILE ORGANIC COMPOUNDS -BENZENE, CHLOROFORM, TOLUENE, AND 1,1,1-TRICHLOROETHANE. BENZENE AND TOLUENE CONCENTRATIONS WERE UNRELATED TO WIND DIRECTION, INDICATING THAT AREA EMISSIONS WERE THE PRIMARY SOURCE. HIGHER VALUES OF CHLOROFORM AND 1,1,1-TRICHLOROETHANE WERE ASSOCIATED WITH WINDS FROM THE DIRECTIONS WHICH INCLUDED MOST INDUSTRIES IN THE AREA.

AM	AMBIENT MONITORING
STATE/LOC	STATE OR LOCAL AGENCY
108-88-3	TOLUENE
20	FOOD AND KINDRED PRODUCTS
207	FATS AND OILS
2079	SHORTENING AND COOKING OILS
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
67-66-3	CHLOROFORM
71-43-2	BENZENE
71-55-6	TRICHLOROETHANE,1,1,1-

TR-540-11
Managers Guide to EPA Activities on Toxic and Hazardous Chemicals
EPA, Washington, DC, OTS Sep 84, 321p, Free

Abstract: Available from: Chemical Coordination Staff, Office of Toxic Substances, Environmental Protection Agency, 401 M Street, S. W., Washington, D.C., 20460, (202) 475-6104. This report provides information on the status of EPA activities on toxic and hazardous chemicals. The report is limited to chemical-specific evaluation and regulatory activities under seven statutes: Clean Air Act; Clean Water Act; Safe Drinking Water Act; Superfund; the Resource Conservation and Recovery Act; Federal Insecticide, Fungicide and Rodenticide Act; and Toxic Substances Control Act. The types of projects listed in the matrix include several kinds of regulatory assessments (such as health, risk, source, exposure and preregulatory assessments) as well as dates of proposal and final rulemakings under the seven statutes. Completed projects and current or planned activities scheduled to occur in fiscal years 1983 through 1985 are included. Depending on the statute under which a chemical is being evaluated or regulated, the projects listed may focus on air or water media or they may be multimedia projects. Indices which include a list of common chemical nomenclature synonyms are also provided in the back of the document. The information presented in this document is current as of June 1984.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
HA	HEALTH ASSESSMENT
PRA	PRE-REGULATORY ASSESSMENT
RA	RISK ASSESSMENT
SA	SOURCE ASSESSMENT

TX0185001
Identifying the Sources of TSP and Lead in El Paso Using Microscopy and Receptor Models
TX AIR CONTROL BOARD
Stuart Dattner, Scott Mgebroff, Gary Casuccio, and Phillip Janocko
06/01/83, 15p pages

El Paso and Cuidad Juarez are located near the western tip of Texas. exceedances of the National Ambient Air Quality Standards (NAAQS) for TSP and lead were recorded during the period of 1977-1981. Since the terrain of the western half is complex with mountain ridges rising 2,000 feet above the Rio Grande river valley, pollutant dispersion models had limited value in determining sources of TSP and lead. The Texas Air Control Board (TACB) spent several years developing techniques which use ambient air measurements to determine sources of pollutants. These techniques are called receptor models. Since the El Paso area had the highest concentrations of TSP and lead in Texas, it was chosen to be the area of the study.
An integral part of this evaluation was directed toward identifying and quantifying sources contributing to TSP, emphasizing sources of particulate lead. This study, the El Paso Quantitative Microscopy Study, incorporated sample collection, sample analysis, and receptor modeling methods to provide a means for evaluating sources of particulate matter and lead.

CL-PM	PARTICULATE MATTER
CL-PM	PARTICULATE MATTER
STATE/LOC	STATE OR LOCAL AGENCY
7439-92-1	LEAD POWDER
7439-92-1	LEAD POWDER

TX0185002
A Discussion of Epidemiologic Studies of Lung Cancer Mortality Rates with Special Attention to the Texas Upper Gulf Coast Area
TX AIR CONTROL BOARD
Virginia L. Smith, JoAnn Wiersema, and James H. Price, Jr.
08/01/85, 10p pages

The recently released "Ill Winds" study, which looked at the relation cal industries, has raised some questions among citizens of several Texas Gulf Coast counties. Chambers, Jefferson, Galveston, and Harris Counties were all identified as having higher lung cancer death rates than the national average, and the "Ill Winds" study suggests that this is because each county either contains, or is downwind of, one or more petrochemical plants.
In response to the concerns and questions that have been raised by the "Ill Winds" study, this report was prepared to discuss what we do know and what we do not know about the relationship between air pollution and cancer. Included is a discussion of some of the difficulties involved in conducting studies related to this topic. In addition, the conclusions of several studies are summarized, including two in which air pollution and cancer in the Texas Gulf Coast were studied.

ES	EPIDEMIOLOGY STUDY
STATE/LOC	STATE OR LOCAL AGENCY
1332-21-4	ASBESTOS
1332-21-4	ASBESTOS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
71-43-2	BENZENE
71-43-2	BENZENE

TX0185003
Risk Assessment in Health Effects Review of Air Permits in Texas
TX AIR CONTROL BOARD
S. Thomas Dydek, Joann Wiersema, and James H. Price, Jr.
06/01/85, 10p pages

In Texas, any facility planning a new or modified emission source must permit applications is a health effects impact evaluation. Health risk assessments are made on a case-by-case basis for emissions from each facility.
The general procedure followed is to compare predicted ground level concentrations of air contaminants (from dispersion modeling) to health-effect based guideline concentrations for these substances. Health guideline concentrations are based on human health effects observed in occupational settings, potency information if available, and data from the epidemiological or toxicological literature.
Case studies of risk assessment for two different types of air pollu tants are presented here. These illustrate how the health effects reviews are conducted for facilities emitting either carcinogenic or noncarcinogenic substances. The different health data sources used and the rationales used in each case are given.

DM	DISPERSION MODELING
RA	RISK ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
107-41-5	HEXYLENE GLYCOL
108-88-3	TOLUENE
110-63-4	1,4-BUTANEDIOL
110-71-4	ETHANE, 1,2-DIMETHOXY-
1300-73-8	DIMETHYLAMINOBENZENE,4-
636-21-5	TOLUIDINEHYDROCHLORIDE,O-

TX0185004
Trends and Approaches in Regulatory Control of Fugitive VOC Emissions
TX AIR CONTROL BOARD
R.J. Tropp
03/01/83, 18p pages

The Texas Air Control Board (TACB) has recently adopted new and re emissions. The TACB contracted with Radian Corporation to develop technical information on the costs and effectiveness of controls on existing stationary VOC sources in Harris County. The results of this work were used to develop a cost-effective fugitive VOC regulation for synthetic organic chemical, polymer, and resin manufacturing processes in Harris County.
Other TACB studies indicated that suggested rules for control of fugitive VOC emissions would needlessly require monitoring many components. Revisions to the VOC fugitive emission control provisions greatly reduce unnecessary monitoring requirements without significantly increasing VOC emissions.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC

TX0185005
Developing Short-Term Net Ground Level Concentration Limits for Lead
TX AIR CONTROL BOARD
Richard J. Tropp, Clayton C. Smith, Cyril J. Durrenberger, and Stuart L. Dattner
06/01/84, 16p pages

The Texas Air Control Board is considering short-term net ground level ambient air quality problems caused by lead emissions from stationary sources. Data for 2-1/2 years were examined from 16 sites in six urban areas in Texas. X-ray fluorescence analysis of 24-hour TSP filter samples was used to determine total lead, to estimate the automotive contribution, and to determine by subtraction the contribution from stationary sources affecting each site. Ranges of 24-hour limits were determined for total and stationary source lead. The 24-hour limits ranged from 2.7 to 4.2 ug/m3 for total lead and from 1.5 to 3.4 ug/m3 for stationary source lead. Dispersion modeling was used to obtain lead concentrations for 1-, 3-, and 5-hour averaging times from the 24-hour lead data and yielded short-term net ground level concentration limits of 8.3, 6.5, and 5.2 ug/m3 of lead for one, three, and five hours respectively. Implications for setting standards for other toxic air contaminants based on the background, history, and development of these short-term standards are also discussed.

CT	CONTROL TECHNOLOGY DOCUMENT
STATE/LOC	STATE OR LOCAL AGENCY
7439-92-1	LEAD POWDER

TX0185006
Report on Peer Review of TACB-UTMB Contract, "Evaluation of Biological Test Systems to Determine the Effects of Air Contaminants on Health" and Discussion of Directions for Future Research
TX AIR CONTROL BOARD
Virginia L. Smith
09/01/85, 3p pages

A meeting was held in August, 1985 at the U.T. Medical Branch in of this peer review was to evaluate (1) the concept of an in situ biological monitoring system, (2) the technical quality of the work accomplished under the current (FY-85) contract, and (3) the direction of future research.
Work performed under the (FY-85) contract demonstrated that while some of the bioassays may not be sensitive enough to detect the effects of exposure to low levels of air contaminants, others do. Metaphase analysis in bone marrow doesn't seem to be adequately sensitive, but the micronucleus assay and pulmonary alveolar macrophage assays may have the required sensitivity. Of the additional assays performed by Dr. Legator's staff, the spleen lymphocyte assay and the liver enzyme test appear to be good indicators of biological effects at low levels of exposure to air contaminants. The reviewers were extremely supportive of this research. The peer review provided an opportunity to discuss work accomplished, and to gauge the most promising direction for future work.

EA	EXPOSURE ASSESSMENT
PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC	STATE OR LOCAL AGENCY
106-89-8	EPICHLOROHYDRIN
126-99-8	CHLOROBUTADIENE,2-,1,3-
1330-20-7	XYLENE
71-43-2	BENZENE

TX0185007
Health Effects Review
TX AIR CONTROL BOARD
JoAnn Wiersema
01/01/85, 6p pages

On February 12, 1982, the Texas Air Control Board adopted a Resolution blic exposure to contaminants which may adversely affect health." The Resolution also instructed the staff to increase priority of efforts to identify, investigate, monitor, and control "air contaminants not regulated under the Federal Clean Air Act."
This document defines "Health Effects Review" and explains the review procedure conducted by Effects Evaluation staff to provide reliable and understandable health effects evaluations to the operational parts of the agency. (Most of these reviews are for permits and special monitoring projects, but some are also carried out in connection with interagency work.)

OT	OTHER
RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

TX0185008
New Source Review in Texas for Noncriteria Air Contaminant Impacts
TX AIR CONTROL BOARD
James H. Price, Jr., JoAnn M. Wiersema, S. Thomas Dydek, Betty Rogers
06/01/85, 7p pages

The Texas Air Control Board (TACB) conducts a thorough review of perdo not result in adverse effects on public health or welfare. Over a period of several years this review process has evolved into a simple yet effective system involving the TACB Permits Division and the Effects Evaluation Section. The latter uses a case-by-case review system, rather than formally-established standards to ensure consistency, thoroughness and flexibility in its health effects reviews. Noncriteria air contaminant emission rates are predicted for each proposed facility. Then both the short-term peak and long-term average ambient concentrations are calculated using screening models. The modeling results are compared to guideline numbers derived from effects information. If modeled concentrations are below guidelines at the highest receptor, the effects review is complete. If they are above guideline at the highest receptor, the effects review is complete. If they are above guidelines, more refined dispersion modeling is conducted to estimate concentrations at points of potential public exposure. If the concentrations exceed the guidelines significantly, the permit engineer works with the company to achieve further reductions.

SA	SOURCE ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY

TX0185009
Time Series and Spectral Analysis of Ozone-Hyrdrocarbon Monitoring Data
TX AIR CONTROL BOARD
Richard Tropp, Jerome Barta, Karen Crum, Stuart Dattner
Keith Zimmermann
06/16/85, 16p pages

A major data collection program was conducted in Harris County, Texas quantities monitored were continuous ambient concentrations of ozone, oxides of nitrogen, carbon monoxide and total hydrocarbons/methane; continuous readings of aerometric variables such as wind speed and direction, ambient temperature and solar radiation; and continuous hourly measurements and identification of 38 hydrocarbon species at three sites. This set of data has been evaluated using a variety of standard techniques. In addition, time series and spectral analysis have been used to determine temporal and spectral relations. Auto-correlations, power spectra, and squared coherence spectra all reveal a strong diurnal influence. The patterns of variation obtained from this work will be used to infer possible relationships in the formation of ozone from hydrocarbon precursors and to help to select appropriate monitoring strategies for toxic hydrocarbons.

STATE/LOC	STATE OR LOCAL AGENCY
10028-15-6	OZONE
10102-43-9	NITRIC OXIDE
10102-44-0	NITROGEN DIOXIDE
109-66-0	PENTANE
142-82-5	HEPTANE
60-35-5	ACETAMIDE
630-08-0	CARBON MONOXIDE
71-43-2	BENZENE
8002-74-2	PARAFFIN WAX FUME

TX0185010
The Feasibility of Using Animal Test Systems in Situ to Assess Possible Human Health Consequences of Exposures to Complex Mixtures of Air Contaminants
TX AIR CONTROL BOARD
Virginia L. Smith, JoAnn Wiersema, James H. Price, Jr., Marvin S. Legator, Ph.D., Barbara L. Harper, Ph.D., Jonathan B. Ward, Jr., Ph.D.
06/01/85, 7p pages

In 1984 the Texas Air Control Board contracted with the University of biological test system to assess effects of exposure to ambient air contaminants. This resulted in a report describing capabilities and limitations of various biological test systems and proposes monitoring the effects of chemicals in ambient air. In the recommended procedure the Combined Testing Protocol--whole animal systems are exposed to ambient air over extended periods of time and a variety of tests to detect biological damage are conducted on the animals intermittently during the exposure period and upon completion of exposure. These tests include the micronucleus assay, metaphase analysis, pulmonary alveolar macrophage assay to detect genetic effects, and urine analysis (S. typhimurium assay) to test for mutagenic metabolites. If adequate sensitivity is demonstrated, it's expected that the Combined Testing Protocol will be adapted to field use, providing a qualitative determination of whether or not complex mixtures of contaminants are in ambient air; and whether synergism or antagonism produce biological damage associated with production of heritable mutations and cancer.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
106-89-8	EPICHLOROHYDRIN
126-99-8	CHLOROBUTADIENE,2-,1,3-
50-00-0	FORMALDEHYDE
71-43-2	BENZENE

TX0185011
Assessment of the Sensitivity of Biological Test Systems to Determine the Effects of Air Contaminants on Health
TX AIR CONTROL BOARD
M.S. Lebator, W.W. Au, B.L. Harper, V.M.S. Ramanujam, J.B. Ward, Jr.
08/28/85, 169 pages

Results of this study indicate that the pulmonary alveolar macrophage levels of a mixture of air contaminants including benzene, chloroprene, and epichlorohydrin. The contractor performed certain assays in addition to those included in the contract, and some of these also proved adequately sensitive, including spleen lymphocyte aberrations, spleen lymphocyte mitotic inhibition, and liver enzyme (glutathione S-transferase) induction. The analysis of urine for mutagenic metabolites, metaphase analysis of bone marrow, and the micronucleus assay on bone marrow did not demonstrate adequate sensitivity. The FY-85 work received a favorable peer review in August by Dr. Edward Massaro, Director of Inhalation Toxicology, EPA; Dr. Frederick deSerres, Associate Director of Genetics, NIEHS; Dr. Gail Arce, biochemist, E.I. duPont de Nemours; and Dr. Myron Mehlman, Director of Toxicology, Mobil. A contract has been approved for FY-86 to determine the dose-response relationship of these bioassays in single-compound exposures including concentrations of benzene, chlorophrene, and epichlorohydrin down to 20 ppb.

EA	EXPOSURE ASSESSMENT
HA	HEALTH ASSESSMENT
STATE/LOC	STATE OR LOCAL AGENCY
126-99-8	CHLOROBUTADIENE,2-,1,3-
1330-20-7	XYLENE
71-43-2	BENZENE

VA0185001
Emission Standards for Non-criteria Pollutants
Rule 4-3, Existing Sources; Rule 5-3 New Sources
VA AIR POLLUTION CONTROL BOARD
01/01/85, 8p pages

Each rule defines non-criteria pollutant, fixes TLVs as 1983 ACGIH rates of emission as a function of TLV.

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

WA02-PSAPCA-1
AIR TOXICS SAMPLING AT WYCKOFF INC., BAINBRIDGE ISLAND, WA
PUGET SOUND AIR POLLUTION CONTROL AGENCY
ENGINEERING SCIENCE
03/01/86, 80 pages

THIS IS A REPORT OF SOURCE TESTS FOR PNA'S (PARTICULARLY NAPHTHALENE) FROM A WOOD PRESERVING PLANT USING CREOSOTE AND PENTACHLOROPHENOL TREATMENTS. BOTH STACK AND FUGITIVE EMISSIONS WERE SAMPLED.

EPA	ENVIRONMENTAL PROTECTION AGENCY
SS	SOURCE SAMPLING
STATE/LOC	STATE OR LOCAL AGENCY
24	LUMBER AND WOOD PRODUCTS
249	MISCELLANEOUS WOOD PRODUCTS
2491	WOOD PRESERVING
91-20-3	NAPHTHALENE

WA02-PSAPCA-2
REGULATION II
PUGET SOUND AIR POLLUTION CONTROL AGENCY
PUGET SOUND AIR POLLUTION CONTROL AGENCY
12/13/84, 28 pages

THIS REGULATION SETS EMISSION STANDARDS FOR VOLATILE ORGANIC COMPOUNDS FROM A NUMBER OF INDUSTRIAL PROCESSES.

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

WA02-PSAPCA-3
SECTION 9.08 OF REGULATION I
PUGET SOUND AIR POLLUTION CONTROL AGENCY
PUGET SOUND AIR POLLUTION CONTROL AGENCY
02/13/86, 1 pages

THIS REGULATION REQUIRES THAT WASTE OIL ONLY BE BURNED OR SOLD TO PERMITTED SOURCES. IT CONTAINS SPECIFICATIONS FOR WASTE OILS.

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

WA02-PSAPCA-4
ARTICLE 10 OF REGULATION I
PUGET SOUND AIR POLLUTION CONTROL AGENCY
PUGET SOUND AIR POLLUTION CONTROL AGENCY
12/12/85, 6 pages

THIS REGULATION SPECIFIES WORK PRACTICE REQUIREMENTS FOR ASBESTOS PROJECTS. IT ALSO CONTAINS A NOTIFICATION PROCEDURE AND FEE SCHEDULE FOR ASBESTOS PROJECTS.

RR	REGULATIONS OR RULES
STATE/LOC	STATE OR LOCAL AGENCY

WA02-PSAPCA-5
WASTE OIL SAMPLING AND ANALYSYS PROCEDURES
PUGET SOUND AIR POLLUTION CONTROL AGENCY
PUGET SOUND AIR POLLUTION CONTROL AGENCY
12/01/85, 10 pages

THIS DOCUMENT IS THE ANALYTICAL PROCEDURES FOR DETERMINING IF LIQUID FUEL IS WASTE OIL. THE PROCEEDURES ARE USED TO ENFORCE SECTION 9.08 OF REGULATION I.

SS	SOURCE SAMPLING
STATE/LOC	STATE OR LOCAL AGENCY

WA02-PSAPCA-6
AIR TOXICS EMISSIONS FROM SELECTED NONTRADITIONAL SOURCES IN THE PUGET SOUND REGION
PUGET SOUND AIR POLLUTION CONTROL AGENCY
ENGINEERING SCIENCE
01/01/86, 140 pages

EMISSION ESTIMATES WERE DEVELOPED FOR SEVERAL NONTRADITIONAL SOURCES OF AIR TOXICS. THE FOLLOWING FIVE SOURCE CATEGORIES WERE INVESTIGATED: PUBLICLY OWNED TREATMENT WORKS (POTW); INDUSTRIAL WASTEWATER TREATMENT PLANTS; SUPERFUND CLEAN-UP SITES; MUNICIPAL LANDFILLS; HAZARDOUS WASTE TREATMENT STORAGE AND DISPOSAL FACILITIES (TSDF'S). EMISSIONS WERE ESTIMATED FOR FACILITIES FROM EACH CATEGORY. PRELIMINARY RESULTS INDICATED THAT TOXIC EMISSIONS FROM HAZARDOUS WASTE HANDLERS AND SUPERFUND SITES SHOWED RELATIVELY SMALL EMISSION POTENTIAL WHILE LANDFILLS AND INDUSTRIAL AND PUBLICLY-OWNED WASTEWATER TREATMENT WORKS CAN SHOW SUBSTANTIAL EMISSIONS.

EPA	ENVIRONMENTAL PROTECTION AGENCY
PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
100-41-4	ETHYL BENZENE
100-42-5	STYRENE
108-38-3	XYLENE,M-
108-88-3	TOLUENE
108-90-7	MONOCHLOROBENZENE
108-95-2	PHENOL
109-99-9	TETRAHYDROFURAN
127-18-4	TETRACHLOROETHYLENE
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
4953	REFUSE SYSTEMS
50	WHOLESALE TRADE-DURABLE GOODS
509	MISCELLANEOUS DURABLE GOODS
5093	SCRAP AND WASTE MATERIALS
56-23-5	CARBON TETRACHLORIDE
67-64-1	ACETONE
67-66-3	CHLOROFORM
71-43-2	BENZENE
71-55-6	TRICHLOROETHANE,1,1,1-
75-09-2	METHYLENE CHLORIDE
75-34-3	DICHLOROETHANE,1,1-
7783-06-4	HYDROGEN SULFIDE
79-01-6	TRICHLOROETHYLENE
87-86-5	PENTACHLOROPHENOL
91-20-3	NAPHTHALENE
95-47-6	XYLENE,O-

WI0185001
Report of Recommendations: Hazardous Emissions Task Force
WI DEPT. OF NAT. RES., BUR. OF AIR MANAGEMENT
James S. Rickun
06/01/85, 48p pages

Recommends a definition of a hazardous air contaminant, standards for requirements for sources of HAC's. Contains a listing of 364 accute HAC's and 133 chronic HAC's.

PD	AIR TOXICS CONTROL PROGRAM SUPPORT DOCUMENTUMENT
STATE/LOC	STATE OR LOCAL AGENCY

WI0185002
GC/MS Analysis of Tenax Air Cartridges
Research Triangle Institute
WI DEPT. OF NAT. RES., BUR. OF AIR MANAGEMENT
Robert D. Voyksner
01/01/85, 74p pages

Results of GC/MS analysis of Tenax-GC Ambient Air Samples taken for Wisconsin Dept. of Natural Resources. Presents list of samples, GC-MS operating parameters, Ion chromatograms of cartridge samples, qualitative analysis of selected cartridges, quantitative results of target compounds, lab quality assurance and a supplement listing resultant (derived) ambient concentrations. Results were inconclusive; concentrations overall were less than 1% of the TLV's, when known.

STATE/LOC	STATE OR LOCAL AGENCY
26	PAPER AND ALLIED PRODUCTS
262	PAPER MILLS, EXCEPT BUILDING PAPER
2621	PAPER MILLS, EXCEPT BUILDING PAPER

WI0185003
Formaldehyde Monitoring at Particle Board Plants
WI DEPT. OF NAT. RES., BUR. OF AIR MANAGEMENT
Chuck Kreimendahl
05/01/85, 29p pages

Reports results of ambient monitoring downwind of particle board continuous monitoring with a CEA instruments, Inc. "Toxic Gas Monitor", concentrations were generally in the range 0-100 ppb, 1-hour coverage with instantaneous peak concentrations to 169 ppb. Impinger samples were analyzed by polarographic method (10% methanol in water) and continuous method was automated wet-chemical, colorimetric, pararosanline method.

STATE/LOC	STATE OR LOCAL AGENCY
24	LUMBER AND WOOD PRODUCTS
249	MISCELLANEOUS WOOD PRODUCTS
2492	PARTICLEBOARD
50-00-0	FORMALDEHYDE

WI0185004
An Interim Monitoring Plan for Hazardous Air Contaminants
Wisconsin Toxic Air Pollutant Monitoring Work Group,
WI DEPT. OF NAT. RES., BUR. OF AIR MANAGEMENT
Julian D. Chazin, Chairman
01/01/86, 60p pages

Program Plan for monitoring of air toxics includes background, intypes of investigative activity, sources of interest, contaminants (pollutants) of interest, a prioritization scheme for monitoring projects, data uses, methodologies for monitoring, sampling and analysis, quality assurance (including a QA plan) and the monitoring-related organization and protocols for Wisconsin.

AM	AMBIENT MONITORING
STATE/LOC	STATE OR LOCAL AGENCY

WY011
PRELIMINARY RISK ANALYSIS OF ARSENIC EMISSIONS FROM A METALS RECOVERY FACILITY
WY DEPT. OF ENV. QUALITY, AIR QUALTIY DIV.
DAVID PATRICK
11/01/85, 25 pages

THIS DOCUMENT DESCRIBES A RISK ASSESSMENT FOR ARSENIC PERFORMED BY THE EPA, POLLUTANT ASSESSMENT BRANCH. THE SOURCE IS A SMALL ARSENIC ACID PRODUCTION FACILITY WHICH RECOVERS ARSENIC FROM LEAD SMELTER FLUE DUST. THE PLANT IS LOCATED NEAR A SMALL CITY OF APPROXIMATELY 30,000 PEOPLE

EPA	ENVIRONMENTAL PROTECTION AGENCY
RA	RISK ASSESSMENT
28	CHEMICALS AND ALLIED PRODUCTS
287	AGRICULTURAL CHEMICALS
2879	AGRICULTURAL CHEMICALS, NEC
7440-38-2	ARSENIC AND COMPOUNDS AS AS

36 FR 23239 12-07-71
National Emission Standards for Hazardous Air Pollutants, Proposed Standards for Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule. This document announces inclusion of asbestos, beryllium and mercury in the list of hazardous air pollutants, describes emission sources and control options available for each pollutant, and defines appropriate test methods and procedures for sampling.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
161	HIGHWAY AND STREET CONSTRUCTION
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY, EXCEPT ELECTRICAL
359	MISC. MACHINERY, EXCEPT ELECTRICAL
3599	MACHINERY, EXCEPT ELECTRICAL, NEC
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

38 FR 8820 04-06-73
National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. This notice summarizes the bases for the Administrator's determinations that asbestos, beryllium, and mercury are hazardous. It explains the derivations of the standards now adopted, the Environmental Protection Agency's responses to the significant comments received, and the principal revisions to the proposed standards.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
161	HIGHWAY AND STREET CONSTRUCTION
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSIRIAL INORGANIC CHEMICALS
2812	ALKALIES AND CHLORINE
32	STONE, CLAY, AND GLASS PRODUCTS
325	STRUCTURAL CLAY PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
33	PRIMARY METAL INDUSTRIES
34	FABRICATED METAL PRODUCTS
35	MACHINERY, EXCEPT ELECTRICAL
359	MISC. MACHINERY, EXCEPT ELECTRICAL
3599	MACHINERY, EXCEPT ELECTRICAL, NEC
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

39 FR 15396 05-03-74
National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Promulgation of revisions to the standards. These revisions include the clarification of various definitions used in the standard, such as 'alternative method', 'commercial asbestos', 'asbestos mill', 'manufacturing', and 'demolition'. The time allowed to notify the Administrator prior to beginning demolition is changed from 20 to 10 days. It is not necessary to remove friable asbestos from supporting structrial members. A clarification is added to make the no-visible-emissions regulation consistent with other similar regulations.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
1332-21-4	ASBESTOS
7439-97-6	MERCURY
7440-41-7	BERYLLIUM

39 FR 38064 10-25-74
Asbestos and Mercury, Proposed Amendments to National Emission Standards for Hazardous Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed amendments to the standards for asbestos and mercury. These amendments include the addition of the manufacture of both shotgun shells and asphalt concrete as major sources of asbestos and the addition of sewage sludge drying or incineration as a major source of mercury. The notice also proposes amendments to Appendix B, Test Methods.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

40 FR 48299 10-14-75
National Emission Standards for Hazardous Air Pollutants, Amendments to Standards for Asbestos and Mercury
EPA, Research Triangle Park, NC, OAQPS

Abstract: Promulgation of the proposed standards as amended. This notice summarizes principal changes to the proposed amendments and the Agency's responses to the major comments received.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4952	SEWERAGE SYSTEMS
7439-97-6	MERCURY

40 FR 59532 12-24-75
National Emission Standards for Hazardous Air Pollutants, Proposed Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule. The proposed national emission standard covers vinyl chloride emissions from ethylene dichloride-vinyl chloride and polyvinyl chloride plants. The notice describes the rationale for regulating vinyl chloride under the authority of Section 112 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

41 FR 19585 05-05-76
Phosphate Fertilizer Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Draft guideline document availability. This notice announces availability of a draft guideline document for the control of atmospheric fluoride emissions from existing phosphate fertilizer plants and invites public comments on the contents of the document. The notice announces the Administrator's determination that fluoride emissions are a welfare-related, rather that a health-related, pollutant.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS

41 FR 46561 10-21-76
National Emission Standards for Hazardous Air Pollutants, Standard for Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. In ethylene dichloride-vinyl chloride plants, the standard limits vinyl chloride emissions from the ethylene dichloride and vinyl chloride formation and purification processes to 10 ppm. For the oxychlorination process, vinyl chloride emissions are limited to 0.2 g/kg of ethylene dichloride product.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

41 FR 48706 11-04-76
Standards of Performance for New Stationary Sources, Emission Guidelines for the Control of Sulfuric Acid Mist from Existing Sulfuric Acid Production Units
EPA, Research Triangle Park, NC, OAQPS

Abstract: Draft guideline document availability. The purpose of this notice is to propose emission guidelines and times for compliance for the control of sulfuric acid mist emissions from existing sulfuric acid production units, and to announce the publication of a draft guideline document concerning the control of sulfuric acid mist emissions from such units. The notice announces the Administrator's determination that sulfuric acid mist is a health-related pollutant.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

42 FR 12022 03-01-77
Phosphate Fertilizer Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final guideline document availability. This notice announces availability of the final guideline document for the control of atmospheric fluoride emissions from existing phosphate fertilizer plants. This action triggers the development of state plans to control fluoride emissions from existing phosphate fertilizer facilities under Section 111(d) of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
16984-48-8	FLUORIDES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
287	AGRICULTURAL CHEMICALS

42 FR 12122 03-02-77
National Emission Standard for Hazardous Air Pollutants, Proposed Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed amendments. This notice lists the reasons EPA is proposing to prohibit the spraying of all materials which contain asbestos in excess of one percent by weight on buildings, structures, structural members, pipes, and conduits. This prohibition includes spray-on application of paints, decorative sprays, and weather-roofing. An amendment is also being proposed which would extend the coverage of the demolition and renovation provisions to include the proper removal of all friable materials which contain in excess of one percent asbestos prior to renovation or demolition of buildings, structures, facilities, or installations.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK

42 FR 28154 06-02-77
National Emission Standards for Hazardous Air Pollutants: Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule. This notice includes proposed amendments to the vinyl chloride standard, applying to new and existing ethylene dichloridevinyl chloride and polyvinyl chloride plants. The intended effect of the proposed amendments is to require improved effectiveness of control technology at existing plants, to impose more stringent emission limits on new sources, and to prohibit an emission increase within the vicinity of an existing source due to the construction of a new source.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2869	INDUSTRIAL ORGANIC CHEMICALS, NEC
75-01-4	VINYL CHLORIDE

42 FR 55796 09-18-77
Standards of Performance for New Stationary Sources, Emission Guideline for Sulfuric Acid Mist
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final guideline document availability. This action establishes emission guidelines and times for compliance and control of sulfuric acid mist from existing sulfuric acid plants. Section 111(d) of the Clean Air Act requires States to control emissions of designated pollutants from existing sources, and this rulemaking initiates the States' action and provides them with guidelines acceptable by EPA.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NSPS	NEW SOURCE PERFORMANCE STANDARD
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
7664-93-9	SULFURIC ACID

43 FR 7597 02-23-78
Kraft Pulp Mills, Draft Guideline Document: Availability
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of availability of draft guideline document. This action announces availability of a draft guideline document to control total reduced sulfur (TRS) emissions from existing kraft pulp mills and invites public comments on the contents of the document. This notice announces the Administrator's determination that TRS emissions are to be considered a welfare-related pollutant, giving States greater flexibility in developing their plans than would be the case if public health were affected.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS
7704-34-9	SULFUR

43 FR 26372 06-19-78
National Emission Standards for Hazardous Air Pollutants, Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. This rule amends the national emission standard for asbestos by extending the requirements of the provisions which apply to the spraying of asbestos-containing materials and to demolition and renovation operations.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK

44 FR 21754 04-11-79
Primary Aluminum Plants; Draft Guideline Document; Availability
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of availability of draft guideline document. This notice announces availability of a draft guideline document for the control of fluoride emissions from existing primary aluminum reduction plants and invites public comment on the document. This notice announces the Administrator's determination that fluoride emissions are to be considered a welfare-related pollutant, giving States greater flexibility in developing their plans than would be the case if public health were affected.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING

44 FR 29828 05-22-79
Kraft Pulp Mills, Final Guideline Document; Availability
EPA, Research Triangle Park, NC, OAQPS

Abstract: Under the authority of Section 111(d) of the Clean Air Act, this action establishes emission guidelines and compliance times for State agencies to use in establishing standards of performance to control total reduced sulfur (TRS) emissions from existing kraft pulp mills.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
26	PAPER AND ALLIED PRODUCTS
261	PULP MILLS
2611	PULP MILLS
7704-34-9	SULFUR

45 FR 26294 04-17-80
Primary Aluminum Plants; Availability of Final Guideline Document
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of availability of final guideline document. Under the authority of Section 111(d) of the Clean Air Act, this action establishes emission guidelines and compliance times for State agencies to use in establishing standards of performance to control fluoride emissions from existing primary aluminum plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
16984-48-8	FLUORIDES
33	PRIMARY METAL INDUSTRIES
335	NONFERROUS ROLLING AND DRAWING

45 FR 26660 04-18-80
National Emission Standard for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from maleic anhydride plants. Emissions from existing sources would have to be reduced to 0.30 kilogram of benzene per 100 kilograms of benzene fed to the reactor. No detectable benzene emissions would be allowed from new sources. A new Test Method 110 is proposed for the determination of benzene emissions from stationary sources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

45 FR 83448 12-18-80
National Emissions Standards for Hazardous Air Pollutants; Benzene Emissions from Ethylbenzene/Styrene Plants; Public Hearing.
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from process vents at existing and new ethylbenzene and styrene (EB/S) plants to five parts per million by volume (ppmv) on a dry basis corrected to three percent oxygen.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

45 FR 83952 12-19-80
Benzene Emissions from Benzene Storage Vessels; National Emission Standard for Hazardous Air Pollutants; Hearing
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from each new and existing storage vessel with a capacity greater than 4 cubic meters used to store pure benzene. The notice describes proposed requirements for fixed/floating roofs, primary and secondary seals, and inspection procedures.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

46 FR 1165 01-05-81
National Emission Standard for Hazardous Air Pollutants; Benzene Fugitive Emissions
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from new and existing fugitive emission sources containing 10 or more percent by weight benzene in the petroleum refining and chemical manufacturing industries. The proposed standard would allow no detectable emissions due to leaks from safety/relief valves and product accumulator vessels; would require a leak detection and repair program for pipeline valves and existing pumps and compressors; and would require certain equipment for new pumps, new compressors, sampling connections and open-ended valves.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
291	PETROLEUM REFINING
2911	PETROLEUM REFINING
71-43-2	BENZENE

47 FR 53059 11-24-82
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Benzene Storage Vessels
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of additional emissions test data. This notice announces the receipt of additional emissions test data for evaluation and inclusion in the project docket for the benzene storage vessel national emission standards for hazardous air pollutants (NESHAP). The American Petroleum Institute (API) has completed an internal floating roof emissions testing program that provides new technical data for the evaluation of available control technologies.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

48 FR 15076 04-06-83
National Emission Standards for Hazardous Air Pollutants; Standards for Radionuclides
EPA, Washington, DC, ORP

Abstract: Pursuant to Section 112, EPA is proposing standards (including appropriate reporting requirements) for sources of emissions of radionuclides in four categories: (1) Department of Energy (DOE) Facilities, (2) Nuclear Regulatory Commission (NRC) licensed facilities and non-DOE Federal facilities, (3) underground uranium mines, and (4) elemental phosphorous plants. The Environmental Protection Agency (EPA) has identified several additional source categories that emit radionuclides and has determined there are good reasons for not proposing standards at this time for these categories. They are the following: (1) coal-fired boilers, (2) the phosphate industry, (3) other extraction industries, (4) uranium fuel cycle facilities, uranium mill tailings, management of high level waste, and (5) low energy accelerators.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2834	PHARMACEUTICAL PREPARATIONS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
73	BUSINESS SERVICES

48 FR 32126 07-13-83
National Emission Standards for Hazardous Air Pollutants; Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. These proposed amendments to the national emission standard for asbestos would reinstate work practice and equipment provisions of the standard that were held not to be emission standards by the Supreme Court in 1978.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK

48 FR 33112 07-20-83
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Arsenic: Proposed rule and announcement of public hearing. In this notice, EPA is proposing standards for certain source categories of inorganic arsenic emissions to the ambient air and is proposing not to regulate others. Pursuant to Section 112, EPA is proposing standards for the following categories of sources of emissions of inorganic arsenic: high-arsenic primary copper smelters, low-arsenic primary copper smelters, and glass manufacturing plants. EPA identified other categories of sources emitting inorganic arsenic; and, after careful study, determined that the proposal of standards for these categories of sources is not warranted at this time. These categories of sources are primary lead smelters, secondary lead smelters, primary zinc smelters, zinc oxide plants, cotton gins, and arsenic chemical manufacturing plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT
7440-38-2	ARSENIC AND COMPOUNDS AS AS

48 FR 55880 12-16-83
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Reopening of public comment period. The period for receiving written comments on the proposed national emission standards for inorganic arsenic is being reopened. EPA is extending the public comment period in response to several requests to do so.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT
7440-38-2	ARSENIC AND COMPOUNDS AS AS

49 FR 5580 02-13-84
Air Pollution Control; Regulation of Polycyclic Grganic Matter Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed decision and opportunity for public hearing. This notice announces the results of EPA's assessment of polycyclic organic matter as a potentially toxic air pollutant. It announces the Agency's purposed decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES

49 FR 8386 03-06-84
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, and Benzene Storage Vessels; Proposed Withdrawal of Proposed Standards
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposal to withdraw proposed standards. This notice proposes to withdraw the proposed standards for benzene emissions from these source categories for the reason that both the benzene health risks (annual leukemia incidence and maximum lifetime risk) to the public from these source categories and the potential reduction in health risks achievable with available control techniques are too small to warrant federal regulatory action under Section 112 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

49 FR 10278 03-20-84
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of reopening of public comment period and request for comments. This notice announces reopening of public comment period for proposed national emission standards for inorganic arsenic used in glass manufacturing plants. Data received since proposal of the standard indicate that more vapor phase inorganic arsenic emissions may be occurring from furnaces producing soda-lime glass than from furnaces producing other types of glass. EPA is requesting comments on three regulatory options for soda-lime furnaces. EPA is also soliciting comments on a possible revision to the zero production rate offsets.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
32	STONE, CLAY, AND GLASS PRODUCTS
321	FLAT GLASS
322	GLASS AND GLASSWARE, PRESSED OR BLOWN
323	PRODUCTS OF PURCHASED GLASS
50	WHOLESALE TRADE-DURABLE GOODS
508	MACHINERY, EQUIPMENT, AND SUPPLIES
5084	INDUSTRIAL MACHINERY AND EQUIPMENT
7440-38-2	ARSENIC AND COMPOUNDS AS AS

49 FR 13658 04-05-84
National Emission Standards for Hazardous Air Pollutants; Amendments to Asbestos Standard
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. This action promulgates amendments proposed July 13, 1983, intended to reinstate work practice and equipment provisions of the standard that were held not to be emission standards by the U.S. Supreme Court in 1978.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
1332-21-4	ASBESTOS
15	GENERAL BUILDING CONTRACTORS
152	RESIDENTIAL BUILDING CONSTRUCTION
154	NONRESIDENTIAL BUILDING CONSTRUCTION
16	HEAVY CONSTRUCTION CONTRACTORS
161	HIGHWAY AND STREET CONSTRUCTION
17	SPECIAL TRADE CONTRACTORS
179	MISC. SPECIAL TRADE CONTRACTORS
1795	WRECKING AND DEMOLITION WORK
32	STONE, CLAY, AND GLASS PRODUCTS
329	MISC. NONMETALLIC MINERAL PRODUCTS
3292	ASBESTOS PRODUCTS

49 FR 22195 05-25-84
Assessment of Toluene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate. This notice describes the results of EPA's assessment of toluene as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
108-88-3	TOLUENE

49 FR 23478 06-06-84
National Emission Standards for Hazardous Air Pollutants; Regulation of Benzene
EPA, Research Triangle Park, NC, OAQPS

Abstract: Response to public comments. This notice responds to public comments on the listing, health effects, and regulation of benzene as a hazardous air pollutant.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
34	FABRICATED METAL PRODUCTS
344	FABRICATED STRUCTURAL METAL PRODUCTS
3443	FABRICATED PLATE WORK (BOILER SHOPS)
71-43-2	BENZENE

49 FR 23498 06-06-84
National Emission Standards for Hazardous Air Pollutants; Benzene Equipment Leaks (Fugitive Emission Sources)
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final rule. The EPA listed benzene as a hazardous air pollutant under section 112 of the Clean Air Act on June 8, 1977. A standard was subsequently proposed for benzene fugitive emission sources (January 5, 1981). This notice responds to comments on and promulgates the standards for benzene fugitive emission sources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
71-43-2	BENZENE

49 FR 23522 06-06-84
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Benzene Emissions from Coke By-Product Recovery Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. The proposed standard would limit benzene emissions from new and existing sources in coke by-product recovery plants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
49	ELECTRIC, GAS, AND SANITARY SERVICES
492	GAS PRODUCTION AND DISTRIBUTION
4925	GAS PRODUCTION AND/OR DISTRIBUTION
71-43-2	BENZENE

49 FR 23558 06-06-84
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, and Benzene Storage Vessels
EPA, Research Triangle Park, NC, OAQPS

Abstract: Withdrawal of proposed standards. This notice responds to public comments on the proposed withdrawal of the proposed standards, and announce the EPA's final action to withdraw the proposed standards for benzene emissions from maleic anhydride process vents, ethylbenzene/stryene process vents, and benzene storage vessels. This decision is based on the conclusion that both benzene health risks to the public and potential reductions in health risks achieveable with available control techniques are too small to warrant Federal regulatory action under section 112 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

49 FR 31680 08-08-84
Air Pollution Control; Regulation of Polycyclic Organic Matter Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final decision. This notice announces the results of EPA's assessment of polycyclic organic matter as a potentially toxic air pollutant. It announces the Agency's final decision not to regulate based on the finding's that ambient air concentrations do not pose a singificant risk to public health.

CL-POM	POLYCYCLIC ORGANIC MATTER
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES

49 FR 33904 08-27-84
National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Benzene Emissions from Coke By-Product Recovery Plants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Repoening of the public comment period. In response to requests from two trade associations, the period for receiving written comments on the proposed national emission standard for benzene emissions from coke by-product recovery plants is being reopened. Comments must be postmarked on or before October 19, 1984.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS
71-43-2	BENZENE

49 FR 36560 09-18-84
National Emission Standards for Hazardous Air Pollutants: Addition of Coke Oven Emissions to List of Hazardous Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Addition to the list of hazardous air pollutants. This notice announces the Administrator's decision to list coke oven emissions as a hazardous air pollutant under section 112 of the Clean Air Act. This decision is based on findings that coke oven emissions pose a significant risk to the public.

CL-COE	COKE OVEN EMISSIONS
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
33	PRIMARY METAL INDUSTRIES
331	BLAST FURNACE AND BASIC STEEL PRODUCTS
3312	BLAST FURNACES AND STEEL MILLS

49 FR 36877 09-20-84
National Emission Standards for Hazardous Air Pollutants Proposed Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule; reopening of public comment period on new information. The period for receiving written comments on the prosposed national emission standards for inorganic arsenic emissions from low-arsenic throughput primary copper smelters is being reopened. Comments must be postmarked on or before November 5, 1984. This action is for the limited purpose of allowing comment on EPA's analyses of new information concerning arsenic emissions and control cost for low-arsenic throughput primary copper smelters.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
33	PRIMARY METAL INDUSTRIES
333	PRIMARY NONFERROUS METALS
3331	PRIMARY COPPER
7440-38-2	ARSENIC AND COMPOUNDS AS AS

49 FR 43906 10-31-84
National Emission Standards for Hazardous Air Pollutants; Regulation of Radionuclides
EPA, Research Triangle Park, NC, ORP

Abstract: Withdrawal of proposed standards. The Agency announces withdrawal of its four standards for radionuclide emissions, effective Oct. 31, 1984.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES
28	CHEMICALS AND ALLIED PRODUCTS
283	DRUGS
2834	PHARMACEUTICAL PREPARATIONS
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
73	BUSINESS SERVICES

49 FR 43915 10-31-84
National Emission Standards for Hazardous Air Pollutants; Standards for Radon-222 Emissions from Underground Uranium Mines
EPA, Research Triangle Park, NC, ORP

Abstract: Advance notice of proposed rulemaking. The agency announces its intent to start a program to consider a standard based on bulkheading or related techniques to control radon emissions from underground uranium mines. This standard could be an emission standard, or a design, equipment, work practice, or operational standard, or a combination thereof.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

49 FR 43916 10-31-84
National Emission Standards for Hazardous Air Pollutants; Standards for Radon-222 Emissions from Licensed Uranium Mills
EPA, Washington, DC, ORP

Abstract: Advance notice of proposed rulemaking. The Agency announces its intent to consider development of standards to control radon-222 emissions from licensed uranium mills.

CL-RAD	RADIATION
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

49 FR 46294 11-23-84
Proposed Guidelines for Carcinogen Risk Assessment
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for carcinogen risk assessment and request for comments. This is the first revision of the 1976 Interim Procedures and Guidelines for Health Risk Assessments of Suspected Carcinogens (U.S. EPA, 1976; Albert et al., 1977). These guidelines describe the general framework to be followed in developing an analysis of carcinogenic risk and some salient principles to be used in evaluating the quality of data and in formulating judgments concerning the nature and magnitude of the cancer hazard from suspect carcinogens.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

49 FR 46304 11-23-84
Proposed Guidelines for Exposure Assessment
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for exposure assessment and request for comments. These guidelines provide the Agency with a general approach and framework for carrying out human or nonhuman exposure assessments for specified pollutants.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
RDG	REG DEVELOPMNT GUIDE

49 FR 46314 11-23-84
Proposed Guidelines for Mutagenicity Risk Assessment
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for mutagenicity risk assessment and request for comments. The current proposed guidelines address the comments received in response to the Agency's proposed mutagenicity risk assessment guidelines and provide the basis for the Agency's risk assessments for mutagenicity. The guidelines adopt the general approach set forth in the 1980 proposal, but reflect additional changes made in response to the comments and to new scientific information generated since the time of the proposal.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

49 FR 46324 11-23-84
Proposed Guidelines for the Health Assessment of Suspect Developmental Toxicants
EPA, Washington, DC, OHEA

Abstract: Proposed guidelines for the health assessment of suspect developmental toxicants and requests for comments. These guidelines describe the procedures that EPA will follow in evaluating potential developmental toxicity associated with human exposure to environmental toxicants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
HA	HEALTH ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

49 FR 50146 12-26-84
National Emission Standard for Hazardous Air Pollutants Review and Proposed Revision of the Standards for Mercury from Mercury-Cell Chlor-Alkali Plants, Swilge Incineration and Drying Plants, and Mercury Ore Processing Facilities
EPA, Research Triangle Park, NC, OAQPS

Abstract: Review and proposed rule. This notice summarizes the information gathered during the review of the mercury NESHAP and proposes the addition of monitoring and reporting requirements to the standard for mercury-cell chlor-alkali plants. It also proposes to allow the owner or operator of an affected facility 15 days to verify the validity of source test data prior to reporting the results to the Administrator.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10	METAL MINING
109	MISCELLANEOUS METAL ORES
1092	MERCURY ORES
28	CHEMICALS AND ALLIED PRODUCTS
281	INDUSTRIAL INORGANIC CHEMICALS
2819	INDUSTRIAL INORGANIC CHEMICALS, NEC
49	ELECTRIC, GAS, AND SANITARY SERVICES
495	SANITARY SERVICES
4953	REFUSE SYSTEMS
7439-97-6	MERCURY

50 FR 1182 01-09-85
National Emission Standards for Hazardous Air Pollutants; Vinyl Chloride
EPA, Research Triangle Park, NC, OAQPS

Abstract: Proposed rule and notice of public hearing. This action proposes administrative and clarifying revisions to the standard and announce decisions pertaining to other aspects of the current standard.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
75-01-4	VINYL CHLORIDE

50 FR 14941 04-16-85
Equipment Leaks of VOC From Synthetic Organic Chemical Manufacturing Industry; Petroleum Refineries; Equipment Leaks of Benzene; Benzene Emissions from Coke By-Product Recovery Plants; Distillation Unit Operations; Volatile Organic Liquid Storage Vessels; and General Provisions
EPA, Research Triangle Park, NC, OAQPS

Abstract: Grant of petition for reconsideration of proposed rules. The EPA is granting a petition for reconsideration of one aspect of the standards of performance for equipment leaks of volatile organic compounds (VOC) in the synthetic organic chemical manufacturing industry (SOCMI). EPA is proposing a change in the exit velocity limits for flares covered by these standards and several others. This proposal is based on new data on flare performance.

CL-VOC	VOLATILE ORGANIC COMPOUNDS
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
28	CHEMICALS AND ALLIED PRODUCTS
29	PETROLEUM AND COAL PRODUCTS
71-43-2	BENZENE

50 FR 24313 06-10-85
Assessment of Chlorofluorocarbon-113 as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate chlorofluorocarbon-113 under the Clean Air Act. This notice announces the results of EPA's assessment of chlorofluorocarbon-113 as a potentially toxic air pollutant. The Agency has determined that available information on the health effects from emissions into the atmosphere is not sufficient to warrant regulation at this time. The findings of an on-going EPA study of the effect of trace gases on stratospheric ozone may lead to a reassessment of this decision and could result in the regulation of chlorofluorocarbon-113 under a variety of authorities, including section 157 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
76-13-1	TRICHLOROTRIFLUOROMETHANE,1,1,2-

50 FR 24314 06-10-85
Assessment of Methyl Chloroform as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of methyl chloroform as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FEDERAL REGISTER NOTICES
74-87-3 METHYL CHLORIDE

50 FR 24317 06-10-85
Intent to List Chromium or Hexavalent Chromium as a Hazardous Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of chromium or hexavalent chromium as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add chromium or hexavalent chromium to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FEDERAL REGISTER NOTICES
7440-47-3 CHROMIUM

50 FR 24319 06-10-85
Pilot Program on Acrylonitrile
EPA, Research Triangle Park, NC, OAQPS

Abstract: Announcement of pilot program. This notice describes the results of the Agency's analysis of acrylonitrile as a toxic air pollutant and announces a Pilot Program to negotiate with State and local air pollution control agencies to further analyze emitting sources to determine if additional controls are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FEDERAL REGISTER NOTICES
107-13-1 ACRYLONITRILE

50 FR 24575 06-11-85
Assessment of Epichlorohydrin as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate epichlorohydrin under the Clean Air Act. This notice describes the results of EPA's assessment of epichlorohydrin as a potentially toxic air pollutant. It announces the decision not to regulate based on the findings that present ambient air concentrations do not pose a significant risk to public health.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FEDERAL REGISTER NOTICES
106-89-8 EPICHLOROHYDRIN

50 FR 32621 08-13-85
Assessment of Carbon Tetrachloride as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of carbon tetrachloride as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add carbon tetrachloride to the list if national emission standards are warranted.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FEDERAL REGISTER NOTICES
56-23-5 CARBON TETRACHLORIDE

50 FR 32627 08-13-85
Decision Not To Regulate Manganese Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of manganese as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA ENVIRONMENTAL PROTECTION AGENCY
FR FEDERAL REGISTER NOTICES
7439-96-5 MANGANESE

50 FR 32628 08-13-85
Air Pollution Control; Assessment of Chlorinated Benzenes as Potentially Toxic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate chlorinated benzenes under the Clean Air Act. The EPA has concluded that the health risk from ambient exposure to any of the chlorinated benzene compounds, including hexachlorobenzene, is not sufficient to warrant regulation at this time.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
108-90-7	MONOCHLOROBENZENE
118-74-1	HEXACHLOROBENZENE

50 FR 32632 08-13-85
Air Pollution Control; Decision Not to Regulate Vinylidene Chloride and Solicitation of Information
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of vinylidene chloride as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
75-35-4	DICHLOROETHYLENE,1,1-

50 FR 34144 08-23-85
National Emission Standards for Hazardous Air Pollutants; Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, and Benzene Equipment Leaks
EPA, Research Triangle Park, NC, OAQPS

Abstract: Denial of petition for reconsideration. The administrator finds that the objections raised by the Natural Resources Defense Council do not provide substantial support for revising the decisions. Also, many of the objections could have been raised during the original rulemaking.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
28	CHEMICALS AND ALLIED PRODUCTS
286	INDUSTRIAL ORGANIC CHEMICALS
2865	CYCLIC CRUDES AND INTERMEDIATES
71-43-2	BENZENE

50 FR 39626 09-27-85
Intent to List Chloroform as a Hazardous Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of chloroform as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add chloroform to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
67-66-3	CHLOROFORM

50 FR 39632 09-27-85
Assessment of Chloroprene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice describes the results of EPA's assessment of chloroprene as a potentially toxic air pollutant and announces EPA's intent not to regulate chloroprene at this time.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
126-99-8	CHLOROBUTADIENE,2-,1,3-

50 FR 40154 10-01-85
Assessment of Hexachlorocyclopentadiene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent not to regulate and solicitation of information. This notice announces the results of EPA's assessment of hexachlorocyclopentadiene as a potentially toxic air pollutant. It announces the Agency's decision not to regulate based on the findings that ambient air concentrations do not pose a significant risk to public health.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
77-47-4	HEXACHLOROCYCLOPENTADIENE

50 FR 40286 10-02-85
Assessment of Ethylene Oxide as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of ethylene oxide as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add ethylene oxide to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
75-21-8	ETHYLENE OXIDE

50 FR 41466 10-10-85
Assessment of 1,3-Butadiene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of 1,3-butadiene as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add 1,3-butadiene to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
106-99-0	BUTADIENE,1,3-

50 FR 41994 10-16-85
Assessment of Ethylene Dichlorid.. (EDC) as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of ethylene dichloride as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add ethylene dichloride to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
107-06-2	ETHYLENE DICHLORIDE

50 FR 42000 10-16-85
Assessment of Cadmium Under the Clean Air Act
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of cadmium as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add cadmium to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
7440-43-9	CADMIUM

50 FR 42037 10-17-85
Methylene Chloride; Initiation of Regulatory Investigation
EPA, Washington, D.C., OPTS

Abstract: Advance notice of proposed rulemaking. This notice announces the Agency's decision to initiate a priority review under section 4(f) of the Toxic Substances Control Act to determine risks of human cancer from certain exposures to methylene chloride.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
75-09-2	METHYLENE CHLORIDE

50 FR 52422 12-23-85
Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of trichloroethylene as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add trichloroethylene to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
79-01-6	TRICHLOROETHYLENE

50 FR 52880 12-26-85
Assessment of Perchloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of intent to list under section 112 of the Clean Air Act and solicitation of information. This notice describes the results of EPA's preliminary risk and health assessment of perchloroethylene as a potentially toxic air pollutant. Based on these results, the Agency now intends to add this substance to the list of hazardous air pollutants for which it intends to establish emission standards under section 112(b)(1)(A) of the Clean Air Act. The EPA will decide whether to add this substance to the list only after studying emissions control techniques and after further assessing public health risks. The Agency will add perchloroethylene to the list if national emission standards are warranted.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
127-18-4	TETRACHLOROETHYLENE

51 FR 3250 01-24-86
Intent to List 1,3-Butadiene as a Hazardous Air Pollutant; Extension of Comment Period
EPA, Research Triangle Park, NC, OAQPS

Abstract: Extension of the public comment period. This notice extended the comment period for 60 days, through February 10, 1986.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
106-99-0	BUTADIENE,1,3-

51 FR 3417 01-27-86
Toxic Pollution Control; Intent to List Cadmium under Section 112 of the Clean Air Act and Solicitation of Information
EPA, Washington, DC, OAQPS

Abstract: Extension of the public comment period. This notice extended the comment period for 90 days, through April 14, 1986.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
7440-43-9	CADMIUM

51 FR 6382 02-21-86
National Emission Standards for Hazardous Air Pollutants; Standard for Radon-222 Emissions from Licensed Uranium Mill Tailings
EPA, Washington, D.C., ORP

Abstract: Proposed rule and announcement of public hearing. This proposed standard considers alternative work practice standards for limiting radon-222 emissions from tailings at licensed uranium mill sites. The EPA is taking the action because it has preliminarily concluded that radon-222 emissions from uranium mill tailings cause significant risks to nearby people and populations. The public hearing on this proposed rule will be held on February 27 and 28, 1986.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
10	METAL MINING
10043-92-2	RADON
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

51 FR 7714 03-05-86
Clarification and Correction of Previously Published Notice on the Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Correction. This notice clarifies and corrects statements published in a previous Federal Register notice on trichloroethylene dated December 23, 1985 (50 FR 52422).

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
79-01-6	TRICHLOROETHYLENE

51 FR 7715 03-05-86
Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final Rule. On December 23, 1985, a notice entitled "Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant" was published (50 FR 52422). Based on the assessment presented in that notice, and corrections to that notice published in 51 FR 7714, trichloroethylene has been added to the list of hazardous air pollutants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
79-01-6	TRICHLOROETHYLENE

51 FR 7718 03-05-86
Clarification and Correction of Previously Published Notice on the Assessment of Perchloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Correction. This notice clarifies and corrects statements published in a previous Federal Register notice on perchloroethylene dated December 26, 1985 (50 FR 52880).

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
127-18-4	TETRACHLOROETHYLENE

51 FR 7719 03-05-86
Assessment of Perchloroethylene as a Potentially Hazardous Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final Rule. On December 26, 1985, a notice entitled "Assessment of Perchloroethylene as a Potentially Toxic Air Pollutant" was published (50 FR 52880). Based on the assessment presented in that notice, and corrections to that notice published in 51 FR 7718, perchloroethylene has been added to the list of hazardous air pollutants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
127-18-4	TETRACHLOROETHYLENE

51 FR 8199 03-10-86
National Emission Standards for Hazardous Air Pollutants: Asbestos Standard; Correction
EPA, Research Triangle Park, NC, OAQPS

Abstract: Correction of a final rule for amendments to the asbestos standard. This action corrects typographical errors.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
1332-21-4	ASBESTOS

51 FR 8205 03-10-86
National Emission Standards for Hazardous Air Pollutants: Standard for Radon-222 Emissions from Licensed Uranium Mill Tailings; Rescheduled Hearing
EPA, Washington, D.C., ORP

Abstract: Announcement of new date for public hearing. The hearing date, previously announced by EPA to consider a proposed emission standard for radon-222 emissions from licensed uranium mill tailings, has been changed to March 25-26, 1986.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
10	METAL MINING
10043-92-2	RADON
109	MISCELLANEOUS METAL ORES
1094	URANIUM-RADIUM-VANADIUM ORES

51 FR 9510 03-19-86
Extension of the Public Comment Periods on the Notices of Intent to List Trichloroethylene and Perchloroethylene as Potentially Toxic Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Extension of the public comment period. This notice extended the comment period for 30 days, through April 1, 1986, for both chemicals.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
127-18-4	TETRACHLOROETHYLENE
79-01-6	TRICHLOROETHYLENE

51 FR 11021 4-01-86
National Emission Standards for Hazardous Air Pollutants; Amendments to General Provisions
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final Rule. The EPA amended Subpart A, the General Provisions for National Emission Standards for Hazardous Air Pollutants (NESHAPs), on November 7, 1985 (50 FR 46284). The promulgated amendments included a list of substances for which EPA has published a notice that included consideration of the serious health effects, including cancer, from ambient air exposure to the substance. This notice amends this list to include additional substances: 1,3-Butadiene (50 FR 41466; October 10, 1985), Cadmium (50 FR 42000; October 16, 1985), Chloroform (50 FR 39626; September 27, 1985) Chloroprene (50 FR 39632; September 27, 1985) Ethylene Dichloride (50 FR 41994; October 16, 1985), Ethylene Oxide (50 FR 40286; October 2, 1985), Hexachlorocyclopentadiene (50 FR 40154; October 1, 1985), Methylene Chloride (50 FR 42037; October 17, 1985),

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
106-99-0	BUTADIENE,1,3-
107-06-2	ETHYLENE DICHLORIDE
126-99-8	CHLOROBUTADIENE,2-,1,3-
67-66-3	CHLOROFORM
7440-43-9	CADMIUM
75-09-2	METHYLENE CHLORIDE
75-21-8	ETHYLENE OXIDE
77-47-4	HEXACHLOROCYCLOPENTADIENE

51 FR 11103 04-01-86
Extension of the Public Comment Periods on the Notices of Intent to List Trichloroethylene and Perchloroethylene as Potentially Toxic Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: This notice corrects one word in the text of the Federal Register notice published on March 19, 1986 (51 FR 9510).

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
127-18-4	TETRACHLOROETHYLENE
79-01-6	TRICHLOROETHYLENE

51 FR 22854 06-23-86
Assessment of Phenol as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of phenol assessment results and solicitation of information. This notice announces the results of EPA's assessment of phenol as a candidate for regulation under the Clean Air Act. The agency has concluded that the health data base for phenol is insufficient in several respects. Given the current lack of information, the EPA does not plan to initiate rulemaking for phenol at this time. This finding has no effect on the regulation of phenol as a volatile organic compound in order to attain the National Ambient Air Quality Standards (NAAQS) for ozone. In addition, this notice does not preclude any state or local air pollution control agency from specifically regulating emission sources of phenol.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
108-95-2	PHENOL

51 FR 27956 08-04-86
National Emission for Hazardous Air Pollutants;
Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final Rule. On June 5, 1980, EPA listed inorganic arsenic as a hazardous air pollutant under Section 112 of the Clean Air Act (48 FR 37886). Standards were subsequently proposed for inorganic arsenic emissions from high-arsenic primary copper smelters, low-arsenic primary copper smelters, and glass manufacturing plants on July 20, 1983 (48 FR 33112). Additional control measures for high-arsenic primary copper smelters and associated arsenic plants were proposed in a December 16, 1983 (48 FR 55880) and additional control options for glass manufacturing plants were proposed in a March 20, 1984, notice (49 FR 10278). This notice reaffirms the administrator's decision that inorganic arsenic is a hazardous air pollutant and responds to comments on and promulgates standards for inorganic arsenic emissions from primary copper smelters, glass manufacturing plants, and arsenic plants. Six other categories of sources emitting inorganic arsenic were also identified and discussed in the July 20, 1983, notice: primary lead smelters, secondary lead smelters, primary zinc smelters, zinc oxide plants, cotton gins, and arsenic chemical manufacturing plants. This notice responds to comments on the decision that standards for these sources were not warranted and reaffirms the decision not to regulate these sources.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

51 FR 32668 09-15-86
Toxic Substances; Standards to Reduce Public Exposure to Chromium Emissions from Comfort Cooling Towers
EPA, Research Triangle Park, NC., ESED

Notice of Solicitation of Information. The purpose of this notice is to solicit information that would: (1) Help EPA determine if there is a need for standards to reduce public exposure to chromium emissions from comfort cooling towers (CCT's) and (2) help EPA develop any standards that are needed. The agency is considering whether to develop standars that would eliminate the use of chromium-based chemicals for treatment of recirculating cooling water in existing and new CCT's. Such standards could be developed under the authority of the Clean Air Act, the Toxic Substances Control Act or both acts.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
7440-47-3	CHROMIUM

51 FR 33992 09-24-86
Guidelines for Carcinogen Risk Assessment
EPA, Washington, DC, OHEA

Abstract: Final guidelines for Carcinogen Risk Assessment. The EPA issued five guidelines for assessing the health risks of environmental pollutants. These are: Guidelines for Carcinogen Risk Assessment, Guidelines for Estimating Exposures (51 FR 34042), Guidelines for Mutagenicity Risk Assessment (51 FR 34006), Guidelines for the Health Assessment of Suspect Developmental Toxicants (51 FR 34028), and Guidelines for the Health Risk Assessment of Chemical Mixtures (51 FR 34014). The Guidelines for Carcinogen Risk Assessment are intended to guide agency evaluation of suspect carcinogens in line with the policies and procedures established in the statutes administered by the EPA. These Guidelines took effect September 24, 1986 and complete the first round of risk assessment guidelines development. These Guidelines will be revised, and new guidelines will be developed, as appropriate.

CL-CARCIN	CARCINOGENS
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

51 FR 34006 09-24-86
Guidelines for the Mutagenicity Risk Assessment
EPA, Washington, DC., OHEA

Final Guidelines for Mutagenicity Risk Assessment. The EPA issued five guidelines for assessing the health risks of environmental pollutants. These are: Guidelines for Carcinogen Risk Assessment (51 FR 33992), Guidelines for Estimating Exposures (51 FR 34042), Guidelines for Mutagenicity Risk Assessment, Guidelines for the Health Assessment of Suspect Developmental Toxicants (51 FR 34028), and Guidelines for the Health Risk Assess-ment of Chemical Mixtures (51 FR 34014). The Guidelines for Mutagenicity Risk Assessment are intended to guide agency analysis of mutagenicity data in line with the policies and procedures established in the statutes administered by the EPA. These guidelines took effect September 24, 1986 and complete the first round of risk assessment guidelines development. These guidelines will be revised, and new guidelines will be developed, as appropriate.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
RA	RISK ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

51 FR 34014 09-24-86
Guidelines for the Health Risk Assessment of Chemical Mixtures
EPA, Washington, DC., OHEA

Final Guidelines for the Health Risk Assessment of Chemical Mixtures. The EPA issued five guidelines for assessing the health risks of environmental pollutants. These are: Guidelines for Carcinogen Risk Assessment (51 FR 33992), Guidelines for Estimating Exposures (51 FR 34042), Guidelines for Mutagenicity Risk Assessment (51 FR 34006), Guidelines for the Health Assessment of Suspect Developmental Toxi-cants (51 FR 34028), and Guidelines for the Health Risk Assess-ment of Chemical Mixtures. The Guidelines are intended to guide agency analysis of information relating to health effects data on chemical mixtures in line with the policies and procedures estab-lished in the statutes administered by the EPA. These guidelines took effect September 24, 1986 and com-plete the first round of risk assessment guidelines development. These guidelines will be revised, and new guidelines will be devel-oped, as appropriate.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
HA	HEALTH ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

51 FR 34028 09-24-86
Guidelines for the Health Assessment of Suspect Developmental Toxicants
EPA, Washington, DC., OHEA

Final Guidelines for the Health Assessment of Suspect Developmental Toxicants. The EPA issued five guidelines for assessing the health risks of environmental pollutants. These are: Guidelines for Carcinogen Risk Assessment (51 FR 33992), Guidelines for Estimating Exposures (51 FR 34042), Guidelines for Mutagenicity Risk Assessment (51 FR 34006), Guidelines for the Health Assessment of Suspect Developmental Toxicants, and Guidelines for the Health Risk Assess-ment of Chemical Mixtures (51 FR 34014). The Guidelines for the Health Assessment of Suspect Developmental Toxicants are intended to guide agency analysis of developmental toxicity data in line with the policies and procedures established in the statutes administered by the EPA. These guidelines took effect September 24, 1986 and com-plete the first round of risk assessment guidelines development. These guidelines will be revised, and new guidelines will be devel-oped, as appropriate.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
HA	HEALTH ASSESSMENT
RDG	REG DEVELOPMNT GUIDE

51 FR 34042 90-24-86
Guidelines for Estimating Exposures
EPA, Washington, DC, OHEA

Abstract: Final Guidelines for Estimating Exposures. The EPA issued five guidelines for assessing the health risks of environmental pollutants. These are: Guidelines for Carcinogen Risk Assessment (51 FR 34042), Guidelines for Estimating Exposures, Guidelines for Mutagenicity Risk Assessment (51 FR 34006), Guidelines for the Health Assessment of Suspect Developmental Toxicants (51 FR 34028), and Guidelines for the Health Risk Assessment of Chemical Mixtures (51 FR 34014). The Guidelines for Estimating Exposures are intended to guide agency analysis of exposure assessment data in line with the policies and procedures established in the statutes administered by the EPA. These Guidelines took effect September 24, 1986 and complete the first round of risk assessment guidelines development. These Guidelines will be revised, and new guidelines will be developed, as appropriate.

EA	EXPOSURE ASSESSMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
RDG	REG DEVELOPMNT GUIDE

51 FR 34056 09-24-86
National Emission Standards for Hazardous Air Pollutants (NESHAPs); Standards for Radon-222 Emissions from Licensed Uranium Mill Tailings
EPA, Washington, DC., ORP

Abstract: Final Rule. This final rule established work practices that apply to tailings at licensed uranium mill sites. Radon-222 is emitted from these tailings in amounts sufficient to produce a risk to public health. The work practices established here will limit the emissions of Radon-222 in accordance with Section 112 of the Clean Air Act.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10043-92-2	RADON

51 FR 34135 09-25-86
Assessment of Nickel Subsulfide and Nickel Carbonyl as Potentially Toxic Air Pollutants
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of nickel assessment results and solicitation of information. This notice announces the results of EPA's assessment of nickel subsulfide and nickel carbonyl as candidates for regulation under the Clean Air Act (CAA). The agency has concluded that although these compounds have been classified as known or probable carcinogens, the present emissions of nickel subsulfide and nickel carbonyl to the extent that they occur, do not pose a significant risk to public health for contracting cancer or non-cancer health effects. Based on this finding, EPA has determined that no federal regulation directed specifically at nickel subsulfide and nickel carbonyl is warranted at this time to protect public health under any section of the CAA. The agency is deferring a decision on other specific nickel compounds pending completion of ongoing nickel health research. This notice has no effect on the regulation of nickel or nickel compounds as particulate matter in order to attain the National Ambient Air Quality Standards (NAAQS) for particulate matter. In addition, this notice does not preclude any state or local air pollution control agency from specifically regulating emission sources of nickel.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
12035-72-2	NICKEL SUBSULFIDE
13463-39-3	NICKEL CARBONYL

51 FR 34904 09-30-86
National Emission Standards for Hazardous Air Pollutants: Vinyl Chloride; Equipment Leaks of Volatile Hazardous Air Pollutants
EPA, Washington, DC, SSCD

Abstract: Final Rule. The EPA proposed administrative and clarifying revisions to the National Emission Standard for Vinyl Chloride (VC) on January 9, 1985, (50 FR 1182). Certain revisions to the standard are promulgated in Subpart F through this action and, to a minor extent, in Subpart V of 40 CFR Part 61. Finally, through this action, the agency denied the petition of the Natural Resources Defense Council (NRDC) and the Environmental Defense Fund (EDF) which sought reconsideration of the EPA's withdrawal of the amendments to the VC standard which were proposed in 1977.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
10043-92-2	RADON
75-01-4	VINYL CHLORIDE

51 FR 35354 10-03-86
National Emission Standards for Hazardous Air Pollutants; Standards for Inorganic Arsenic
EPA, Research Triangle Park, NC, OAQPS

Abstract: Correction. This notice clarifies and corrects statements published in a previous Federal Register Notice on inorganic arsenic dated August 4, 1986 (51 FR 27956).

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
NESHAP	NAT'L EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS
7440-38-2	ARSENIC AND COMPOUNDS AS AS

51 FR 7715 03-05-86
Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Final Rule. On December 23, 1985 a notice entitled "Assessment of Trichloroethylene as a Potentially Toxic Air Pollutant" was published (50 FR 52422). Based on the assessment presented in that notice, and corrections to that notice published in 51 FR 7714, trichloroethylene has been added to the list of hazardous air pollutants.

EPA	ENVIRONMENTAL PROTECTION AGENCY
PRA	PRE-REGULATORY ASSESSMENT
79-01-6	TRICHLOROETHYLENE

52 FR 2836 01-27-87
Hazardous Chemical Reporting; Emergency Planning and Community Right-to-Know Programs
EPA, Washington, DC, OSW & ER

Abstract: Proposed rule. Section 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA), signed into law on October 17, 1986, requires the Administrator to publish a uniform format for emergency and hazardous chemical inventory forms within three months. Under Sections 311 and 312 of SARA, facilities required to prepare or have available a material safety data sheet (MSDS) under the Occupational Safety and Health Act (OSHA) and its implementing regulations must submit the MSDS and the inventory forms to local and state officials. These reporting provisions provide public access to information on hazardous chemicals present in the local community for a wide variety of uses including emergency response and environmental and public health planning priorities. The purpose of this proposed rule is to publish for comment the inventory forms and propose regulations to implement the MSDS and inventory reporting requirements. If this proposed rule is adopted as a final rule, effective dates relevant to the rule would include the following: 1) initial submission of material safety data sheets or alternative list October 17, 1987; and 2) initial submission of the inventory form containing Tier I information March 1, 1988.

EPA	ENVIRONMENTAL PROTECTION AGENCY
ER	ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES
FR	FEDERAL REGISTER NOTICES

* U.S.GOVERNMENT PRINTING OFFICE:1987-726-000/61502

52 FR 5496 02-23-87
Assessment of Copper as a Potentially Toxic Air Pollutant
EPA, Research Triangle Park, NC, OAQPS

Abstract: Notice of copper assessment results and solicitation of information. This notice announces the results of EPA's assessment of copper as a potentially toxic air pollutant. The Agency has determined that available information on the health effects from emissions into the atmosphere is not sufficient to warrant regulation at this time. Comments must be received on or before May 26, 1987. This finding has no effect on the regulation of copper as particulate matter to attain the NAAQS for particulate matter. In addition, this notice does not preclude any state or local air pollution control agency from specifically regulating emission sources of copper.

EPA	ENVIRONMENTAL PROTECTION AGENCY
FR	FEDERAL REGISTER NOTICES
PRA	PRE-REGULATORY ASSESSMENT
7440-50-8	COPPER

52 FR 13378 04-22-87
Extremely Hazardous Substances List and Threshold Planning Quantities; Emergency Planning and Release Notification Requirements
EPA, Washington, DC, OSW & ER

Abstract: Final rule. Section 302 of the Superfund Amendments and Reauthorization Act of 1986 (SARA), signed into law on October 17, 1986, required the Administrator of EPA to publish a list of extremely hazardous substances within 30 days. The Administrator was also required to simultaneously publish an interim final regulation establishing a threshold planning quantity for each substances on the list and initiate a rulemaking to finalize these regulations. The list and planning quantities trigger emergency planning in states and local communities under SARA. On November 17, 1986, EPA published an interim final rule codifying the statutorily prescribed list of extremely hazardous substances, the corresponding threshold planning quantities for those substances, and the local and state reporting requirements for facilities at which extremely hazardous substances or other "hazardous substances" are present. On November 17, EPA also proposed revisions to the list of extremely hazardous substances. The rulemaking of April 22, 1987, revises the list of extremely hazardous substances, the threshold planning quantities, and the emergency planning and release reporting requirements based on public comments received on the interim final rule and proposed revisions.

EPA	ENVIRONMENTAL PROTECTION AGENCY
ER	ACCIDENT PREVENTION AND/OR EMERGENCY RESPONSE PROCEDURES
FR	FEDERAL REGISTER NOTICES